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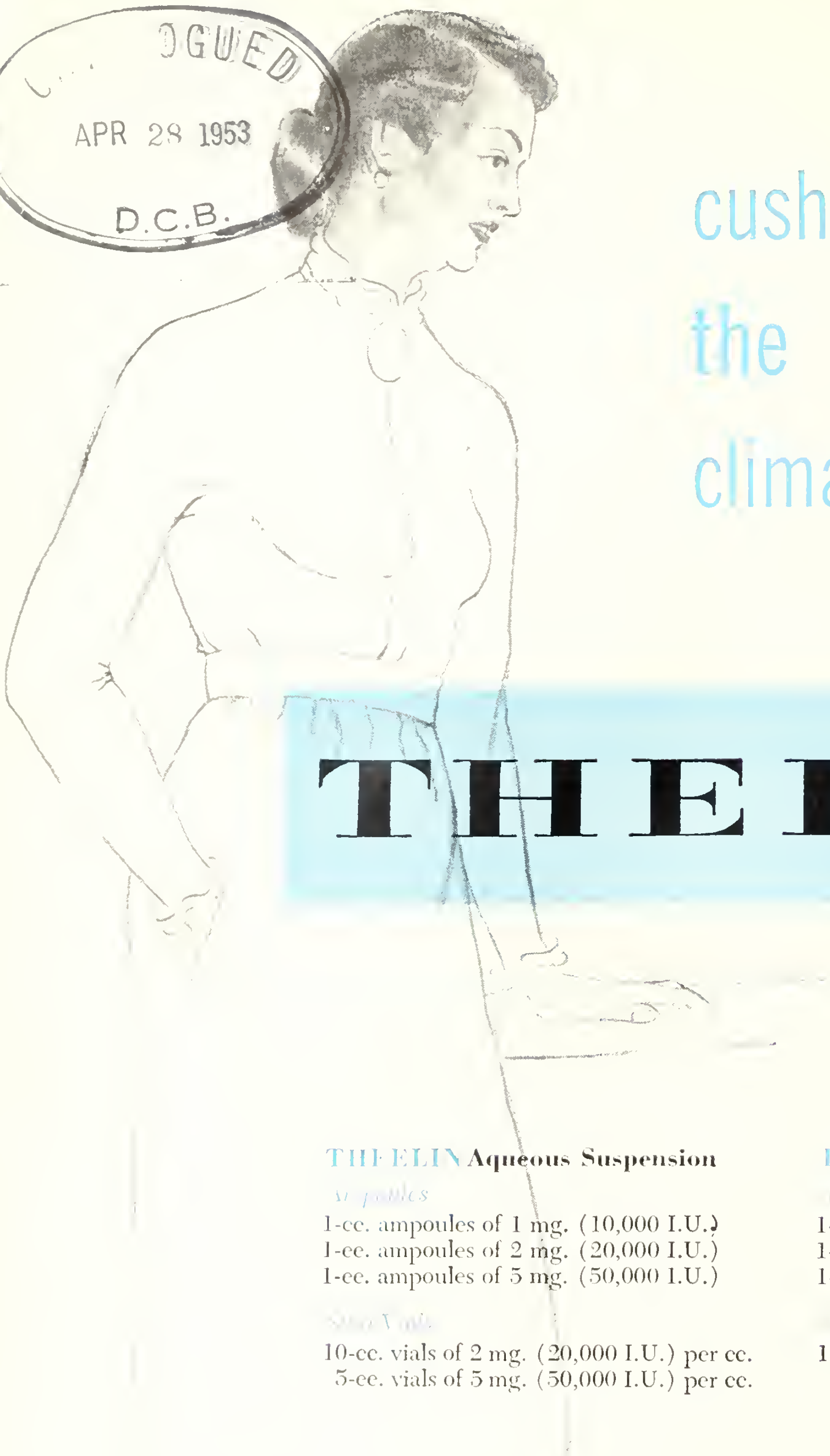

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Journal of the Tennessee State Medical Association

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An everyday complaint in the family physician's office is that of urinary symptoms on the part of some of his female patients—frequency, burning and nocturia. The author has outlined the common causes and their management.

BLADDER IRRITATION IN THE FEMALE

CHARLES C. STAUFFER, M.D.,* Jackson, Tennessee

The information which is presented here does not involve any particularly new concepts of bladder disease nor any original investigation on my part. It is intended rather as a brief review of the various lesions of the bladder, primarily the female bladder, which will produce symptoms of irritation of that organ, and the common treatment of such lesions.

The bladder may be a source of aggravation both to the patient and to the physician who treats it. On the other hand, if the underlying condition can be correctly diagnosed and properly treated, the doctor will find himself with an extremely grateful patient.

The diseases most commonly giving rise to symptoms of bladder irritation are, acute cystitis, trigonitis and urethritis.

Cystitis

The acute cystitis includes the unfortunate but relatively common "honeymoon cystitis". True acute cystitis is an infection usually by either the colon bacillus or the staphylococcus, and consequently will ordinarily respond rapidly to treatment by the use of the appropriate antibiotic or chemotherapeutic drugs.

Chronic infections of the bladder, with or without symptoms, may be caused by the same infecting organisms but may not respond so readily to the antibiotics. The lack of good clinical or laboratory response usually will be found to be due to one or more complicating factors, such as residual urine, foreign body or tumor. Incomplete emptying of the bladder may be the result of stenosis or stricture of the urethra, or to cystocele urethrocele or both. Stones or tumors in any portion of the urinary tract are frequently but not invariably associated with infection, and the success in treatment of any of the above conditions depends primarily upon the removal of the underlying complicating process.

Fortunately, infections due to B. pyocyaneus, B. proteus, and B. tuberculosis are relatively uncommon. Their treatment is frequently disappointing unless the source is localized and can be completely removed. Probably the most flagrant of all of the bladder infections, although relatively uncommon, is that due to gonorrhea. Patients with gonococcal cystitis are acutely ill, with fever and prostration, usually passing grossly bloody urine with marked frequency and urgency. Fortunately, the specific antibiotics will usually control this infection very promptly.

Trigonitis and Urethritis

As opposed to the acute infections, a lesion which is probably just as common, usually more troublesome and frequently incorrectly diagnosed as infectious, is that of trigonitis and/or urethritis. They are considered together because one is usually associated with the other to a greater or lesser degree. This lesion is a sterile inflammation of the affected part and consequently may not be benefited by any amounts of the antibiotic drugs which are frequently administered. Such drugs should not be used in the treatment of these conditions as infection often plays only a minor role if it is present at all. The etiology of such lesions is not well understood but the treatment is quite successful. Some authors assume that there is an underlying infectious process present, usually of one or both kidneys, but urinary infection is not the rule in these cases.

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*From The Jackson Clinic, Jackson, Tennessee

The frequent mistake in the diagnosis of trigonitis is that the presence of infection is based upon the findings in a voided specimen of urine. Regardless of the state of personal hygiene of any particular patient, a urine specimen voided by any female will usually be contaminated by material from outside of the bladder and therefore gives a distorted picture of the true nature of the disease. The microscopic examination of any urine specimen voided by a woman is of value only if it is within normal limits. When abnormal elements are found in a voided specimen, a catheterized specimen must be obtained in order to differentiate bladder infection from sterile inflammation, particularly since the symptoms may be exactly the same. Catheterization of the female is an easy, safe and certainly a valid office procedure in the investigation of complaints referable to the bladder. (I certainly do not mean to infer the same for the average male, in whom the voided specimen properly collected is of more value than that obtained by catheter.) For the various chemical tests, certainly a voided specimen is entirely adequate.

Miscellaneous

Other sources of bladder symptoms which are less common but equally distressing to the patient are interstitial cystitis or Hunner's ulcer, allergic cystitis and urethral caruncle. The first will give rise to complaints of marked frequency and suprapubic pain when the bladder is full, almost invariably and spontaneously relieved by voiding. The frequency is many times incapacitating and the pain is very real. The bladders of such patients will be of limited capacity, and upon examination with the cystoscope, which is the only method of diagnosis, small linear ulcers and scars can be seen, usually in the anterior or superior portions. The reason for the symptoms is therefore apparent. With a reduced bladder capacity and a normal urinary output, the patient must void more frequently. The pain is due to the stretching and sometimes the cracking open of the ulcer and its consequent exposure to the urine. The lower the pH of the urine the more aggravating the pain.

I have seen very few patients with symptoms which I really believed were due to any allergic condition. However, it is certainly logical to assume that the mucous membrane of the bladder or urethra could react in the same way as such tissues in other portions of the body.

Urethral caruncles will give rise to frequency and burning. The frequency is due to the mere presence of any lesion at the meatus, and the burning to the passage of urine over the granulation tissue of the lesion. Caruncles are usually very delicate and consequently the patients will frequently experience some degree of bleeding, or notice blood on the clothes.

Bladder tumors, primary or secondary, stones and other foreign bodies need no further explanation as a source of irritative symptoms and abnormal elements in the urine examination.

Diagnosis

For the diagnosis of the underlying pathological processes noted above, we have several means at our disposal. As in most medical conditions a good history is of primary importance. The symptomatology of the patients under discussion is frequency, nycturia and burning, commonly with the passage of some degree of pus or blood. Fever may or may not be present but often is with the true acute infections, particularly if drainage is inadequate. In obtaining a history from such patients it is well to be sure that the frequency is real. Should one obtain a history of frequency without nycturia, he may be suspicious of the presence of organic disease. (Nycturia without significant frequency may be associated with the nocturnal restlessness of arteriosclerotic patients, but this is more commonly observed in males.) If bleeding is present, some help may be obtained if the patient is sufficiently observant to tell whether it is initial, terminal or continued throughout urination. It is obvious for instance, that initial or terminal bleeding would not likely arise from any lesion above the bladder, although the opposite may be true, that is, blood throughout urination from a bladder lesion. The burning also may be throughout urination or terminally, depending upon the presence of a true acute infection or of a localized sterile inflammation of a portion of the bladder or urethra.

The physical examination is of less value in differentiation, for one will usually find some tenderness on bimanual palpation of the bladder whether the pathology is sterile inflammatory, infectious or foreign body.

From a proper examination of the urine, a cause for polyuria can frequently be found. The specific gravity, albumin and sugar determinations will usually give an answer. On the other hand the microscopic examination of the sediment after centrifugation will usually demonstrate a reason for frequency. Infectious lesions will show pus and bacteria, with or without some red blood cells. Pus, in the absence of bacteria demonstrable by the usual stains, should raise the question of tuberculosis, although chronically residual urine may produce the same findings. Under the same circumstances, one may find large numbers of bacteria with an insignificant amount of pus. One should remember that a very few pus cells are usually found in any urine specimen, particularly if it is relatively concentrated. In the case of the sterile inflammations, considerable information is gained by the absence of pus in the sediment, and it is also frequently true that trigonitis will produce epithelial cells and some mucus. Disregarding mucoid tumors, which are very uncommon, mucus in the urinary sediment is almost diagnostic of inflammation of the trigone, as that is the only portion of the urinary tract above the bladder neck which contains mucous glands. If pus is present, a stain is advisable for the determination of the type of infection that is, coccal or bacillary, so as to enhance the probability of cure by use of the appropriate drug. Gonococcal infections can usually be diagnosed by almost any stain, although the gram stain is the accepted one. Under ordinary circumstances, a methylene blue stain of the sediment will give all the necessary information, as practically all of the pathogenic bacilli are gram negative and the cocci, excepting Neisseria, are gram positive.

The positive diagnosis of any bladder lesion rests with the cystoscopic examination and will of course be employed by a urologist when it is applicable. It may, however, be deferred if the process is an acute infection, as instrumentation may be unwise under such circumstances.

Bleeding, particularly in the absence of infection, should be investigated immediately cystoscopically, so that the source may be accurately determined.

Treatment

The alleviation of symptoms of bladder irritation will be dependent largely upon the accuracy of the diagnosis. The great majority of uncomplicated acute infections of the bladder would probably subside spontaneously, although the use of the proper antibiotic or chemotherapeutic drug will doubtless hasten the patient's recovery and prevent many complications. I prefer to use either penicillin or sulfadiazine for coccal infections, and sulfacetamide, gantrisin or streptomycin for bacillary infections. This preference is based largely upon the findings of Alyea and his co-workers who have studied the value of many of the sulfonamides in the treatment of urinary tract infections. Since practically all of such drugs is excreted by the kidneys, the urinary concentration will be about three times the level obtained in the blood. Consequently, two grams daily, in divided doses, is usually sufficient for the treatment of urinary infections, with perhaps twice that dose in the first twenty four hours. Both sulfacetamide and gantrisin are extremely soluble and sulfadiazine fairly so. They can all be used safely therefore, except in patients who give a history of previous sensitivity to sulfonamide drugs. Terramycin has a broad antibacterial spectrum but unfortunately is still rather expensive and there are frequently associated gastrointestinal symptoms incident to the use of the drug itself.

If a patient has a single acute infection which responds promptly to drug therapy, I believe that no further investigation is indicated. Should the infection fail to respond or recur, more thorough urologic study is in order. Such cases will most often be found to be complicated in one way or another, usually by urethral stricture or cystocele, resulting in residual urine in the bladder, or by some foreign body such as stone or tumor. Of course, a stone or tumor in a kidney may result in a persistent and resistant low grade infection without symptoms.

Urethritis and trigonitis usually will fail to respond to any of the antibiotics as there often is no infection present. There is, however, no reason why an acute infection cannot be superimposed on a sterile inflammation. In such a case, one might expect a good laboratory response with drugs, but unsatisfactory clinical improvement. The inflammatory lesion itself may be treated by gentle cauterization with instillations of increasing strengths of silver nitrate solution, usually combined with urethral dilatation in order to improve bladder drainage. Dilatation may also help to improve the drainage of some of the peri-urethral glands which may be infected. Should cauterization by instillation prove ineffective, the trigone and urethra can be cauterized by topical application of stronger solutions of caustic, through the air endoscope. These treatments are quite successful in alleviating the symptoms but they may recur at a later date necessitating further treatment.

Interstitial cystitis is a difficult lesion to treat successfully. The ulcers in the bladder may be electrically fulgurated, followed by hydraulic distension of the bladder to increase its capacity. The fulguration must be done under anesthesia, but the follow-up dilatation is an office procedure. The aim of treatment in such cases is to cauterize the base of the ulcers. The bladder must therefore be forcibly distended in order to open the ulcer to its base, following which it is fulgurated or the bladder instilled with a mild cauterizing agent. Actually, the patient herself must carry out most of her treatment if it is to be successful. She must allow urine to accumulate in the bladder beyond the volume at which voiding is desired.

Urethral caruncles may be treated by local cauterization or fulguration if the diagnosis is certain. Carcinoma of the urethra is uncommon but if any question of its presence exists, a biopsy can remove the lesion and establish the diagnosis at the same time.

The treatment of symptoms due to stones and tumors must depend upon the removal of the offending causative agent.

Some of the antispasmodic drugs such as donnatal, pavatrine or hyoscyamus may be of value, and certainly will relieve many symptoms. If the urine is particularly acid, an alkalinizing agent will be beneficial and may be added to the antispasmodic. Banthine is a powerful antispasmodic but some care must be taken in its use.

Summary

Due to treatment with the antibiotic and chemotherapeutic agents, the prognosis of the acute infections is excellent The symptoms due to sterile inflammations can frequently be cured or alleviated for varying periods of time, following which successful treatment can again be instituted. If calculi are present they can usually be removed. Tumors can be treated, but must be watched periodically for an indefinite time for probable recurrence. Residual urine due to stricture can be relieved, and that due to cystocele may be eliminated by the proper surgical procedures. Therefore, the proper treatment will usually result in a satisfied and often a very grateful patient.

In terms of numbers of patients permanently benefited, cortisone probably has found its greatest usefulness in the field of ophthalmology. There follows the accumulated experience of some of the ophthalmologists of Tennessee in their first year's trial of this hormone.

CLINICAL RESULTS WITH CORTISONE IN OPHTHALMOLOGY*

CHARLES KING, M.D., PHIL LEWIS, M.D., and WESLEY McKINNEY, M. D., Memphis, Tennessee

Within the past twelve months cortisone has been made available through our hospitals and at a price which is not prohibitive to the patient. Reports of clinical observations on the use of cortisone in ocular inflammatory diseases have trickled into the literature within the past year. Most of these reports include the systemic use of the hormone, with a few reports concerning topical or local use of the drug. It was thought it would be of interest, if enough clinical observations by several local groups could be collected, to present a summary of these for thought and discussion. Realizing fully the lack of controls, lack of laboratory data and lack of sufficient elapse of time after treatment for final evaluation, the following material is presented for whatever it may prove to be worth.

Local or topical use of cortisone presents several advantages, among which are: 1. the relatively small amounts of the drug required; 2. the apparent freedom from a depressing effect on the adrenal cortex and freedom from adverse metabolic changes in the body as a whole; 3. the more permanent results because the adrenal cortex secretion is not disturbed; 4. the ease of application.

For topical application the standard concentration of cortisone acetate, 25 milligrams per cc., was diluted 1:4 with normal saline and used as eye drops every hour during the day and every two hours during the night. There was necessarily some variation of this regimen among the various participants in the study. For local application subconjunctival injection of 0.3—0.6 cc. of undiluted cortone acetate, 25 mg./cc., was given after anesthesia of the conjunctiva with a cotton pledget soaked in 4 per cent cocaine. The lower half of the globe seemed to offer the most favorable site for injection of the larger dosage; however, the medicine was tolerated well with little or no discomfort regardless of the chosen site. Absorption of the drug continues from seven to fourteen days.

(Table I contains the aggregate experience of the several authors in the use of cortisone in ophthalmological diseases.)

One of us (Phil Lewis) feels that "from my limited observation I think the drug is of value in most of the acute and subacute inflammatory diseases, but of little value in non-inflammatory conditions such as chronic uveitis. It certainly excels all previously available agents in scleritis and episcleritis. It is very helpful in ordinary (non-granulomatous) acute iritis and various inflammatory diseases of the cornea. I have had occasion to use it in ten post-operative cataract cases. Three had a mild endophthalmitis, two of which were thought to have been caused by materials used at operation which were contaminated due to a defective autoclave. There were three cases of rather severe striate keratitis and four cases of mild iridocyclitis. All of these were definitely improved by cortisone instilled in the eye every two hours from 6:00 A.M. to 10:00 P.M., for from three to ten days. In none was normal healing retarded. The case with epithelial ingrowth had been treated with large doses of x-ray. She wished to have the 'miracle drug' tried before consenting to the inevitable enucleation."

Probably the most striking response occurred in one of our cases (that of Charles King), an instance of interstitial keratitis. A thorough general and laboratory study was done, and patient was found to have dental abscesses, chronic

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*Read before the Tennessee Academy of Ophthalmology and Otolaryngology, April 9, 1951, Nashville.

TABLE I

THE EFFECT OF CORTISONE UPON LESIONS OF THE EYE*

Disease	No. Cases	How used	Result
Conjunctivitis			
Phlyctenular	1	instilled	improved
Allergic	4	instilled	3 improved, 1 unimproved
Corneal Lesions			
Recurrent dendritic keratitis	1	instilled	unimproved
Interstitial keratitis	3	instilled	2 greatly improved, 1 unimproved
Interstitial keratitis (luetic)	1	instilled & injected	improved
Degenerative pannus	1	instilled	moderately improved
Disciform keratitis	2	instilled	moderately improved
Fatty degeneration	1	instilled	moderately improved
Corneal ulcer—foreign body	1	injected	improved
Chemical burns	2	instilled	improved
Marginal ulcer	2	instilled	much improved
Spontaneous edema 1 yr. after cataract extraction	1	local	complete clearing maintained
Bilateral granular epithelial dystrophy	1	local	unimproved
Fuch's dystrophy	2	local	unimproved
Epithelial dystrophy, birth injury of Descemets membrane	1	local	unimproved
Uveal tract lesions			
Acute and subacute iritis	10	1 injected 10 instilled	all improved (7 rapidly, 2 moderately, 1 slightly)
Acute, severe plastic iritis	2	injected	improved (1 rapidly, 1 slowly)
Subacute uveitis	2	injected	improved (1 rapidly)
Chronic uveitis	7	6 bath & 1 injected	2 improved, 5 unimproved
Choroiditis	4	1 bath & 3 injected	much improved
Secondary glaucoma (predominant feature)	3	2 bath & 1 instilled	1 improved, 2 unimproved
Macular edema	1	injected	unimproved
Post-operative complications			
Striate keratitis	3	instilled	improved
Iridocyclitis (mild)	7	6 instilled, 1 injected	improved
Epithelial ingrowth	1	bath	unimproved
Endophthalmitis (mild)	3	instilled	improved
Traumatic injuries			
Iridocyclitis	1	instilled	improved
Traumatic cataract	1	instilled	improved
Traumatic cataract with iridocyclitis and glaucoma	1	instilled	improved
Miscellaneous			
Lupus erythematosus	1	instilled	unimproved
Atropine sensitivity	1	instilled	improved
Episcleritis	2	instilled	rapidly improved
Pericorneal injection — mild irritability — herniation of vitreous into ant. chamber	1	instilled	improved
Epithelial ingrowth	1	instilled	unimproved
Arthritis with recurrent iritis	1	instilled	unimproved

*The table is a composite of cases treated by:—Dr. P. M. Lewis—43 cases; Doctors Stanford, Wilson and King—15 cases; Dr. J. Wesley McKinney—18 cases.

tonsillitis; a 1 plus Hinton reaction was found though blood Kahn and Wassermann tests were negative and there were no stigmata of congenital syphilis.

The 17 year old white female was first seen on September 4, 1950 with a complaint of blurred vision in the left eye of about a week's duration. Ciliary injection, punctate keratitis and generalized corneal infiltration were present but worse in the lower half. Tests for tuberculosis using PPD No. 1 and No. 2 were negative. Supportive atropine therapy was instituted. There was some delay in arranging for dental care and tonsillectomy, meanwhile the family doctor treated the patient with very large doses of penicillin.

In about four weeks the right eye began to show the early signs found in the left eye at the first visit. The cornea of the left eye by this time was becoming vascularized in the deeper layers surrounding a ring-shaped grouping of large infiltrates and punctate keratitis in the center of the cornea. All carious teeth were extracted and tonsillectomy was done. While the patient was in the hospital 0.6 cc. of cortisone was given subconjunctivally in each eye in the lower temporal quadrant and 1 drop of 1:4 dilution was instilled in the conjunctival sac every hour between 7:00 A.M. AND 11:00 P.M. Within ten days all vascularization of the left cornea had disappeared and no vascularization of the right cornea had occurred. About ten weeks after the first visit

(6 weeks on cortisone) vision in the right eye was 20/50, in the left eye 20/25! Cortisone was discontinued.

In January 1951 the patient had a severe siege of influenza with a recurrent flare-up of keratitis and iritis in the right eye. Cortisone therapy was resumed in this eye. There has been a gradual decrease in the amount of infiltrate and punctate keratitis, and at the last visit only faint ciliary blush and two small posterior synechiae were present. The patient has been free of pain in the eyes throughout the entire course.

The authors fully realize that "one swallow does not make a meal," and that statistics as in the table can be juggled by one's imagination to prove contradictory conclusions. However, clinical evidence points to the fact that many cases of acute inflammatory of the eye disease respond favorably to local cortisone therapy. Instillation of the drug into the conjunctival sac and subconjunctival injection is a practical, inexpensive means of administration and is preferable in several respects to intravenous typhoid vaccine or other forms of foreign protein therapy. There has as yet been no definite established dosage of the drug for systemic use nor have all the various side effects, early and late, been recorded. However, since the drug has been made available to the practicing physician it has been widely used, often without the diagnosis having been made and without laboratory checks on alterations of the blood elements, electrolytic balance and changes in metabolism. This can lead to careless examinations on the part of some ophthalmologists and actually dangerous practices by the general physician.

As an example it should be emphasized that a case of acute iritis may need not only cortisone, but does also need mild dilatation of the pupil with a powerful mydriatic at an early stage of the disease. Irreparable damage to the eye may occur while cortisone, without the exhibition of mydriatics, is being used. Early serious, or even worse damage may occur from treating an acute glaucoma with nothing but cortisone.

Therefore, we wish to point out clearly to all general practitioners that while cortisone does control, or may apparently cure many of the inflammatory eye diseases, it should not be used indiscriminately nor for long, unless improvement is immediate. It is not a "cure all" but has put into the hands of the ophthalmologist an agent which aids in preventing protracted inflammation and its damaging sequelae.

Addendum

Since preparing this resume several reports on the local use of cortisone in eye diseases have appeared.

Steffenson, E. H. et al, (Am. J. Ophth. 43:345, 1951) report the use of cortisone in 24 cases of anterior segment eye diseases. It was effective in: (1) non-specific keratitis profunda; (2) non-specific superficial keratitis; (3) postoperative striate keratitis; (4) phlyctenular keratoconjunctivitis; (5) tuberculous keratitis; (6) acne rosacea keratitis; (7) certain cases of acute iritis. It was ineffective in: (1) vernal conjunctivitis; (2) dendritic keratitis; (3) trophic ulcer; (4) Fuchs epithelial dystrophy.

Thygeson, P. et al, (Am. J. Ophth. 43:357, 1950) reported 26 cases of phyctenular keratoconjunctivitis in which response was dramatic after injection or instillation. The few relapses responded to renewal of therapy.

Leopold, I. H. et al, (Am. J. Ophth. 43:361, 1951) present a summary of results showing the drug to be effective in: (1) infections, bacterial, (blepharitis), viral (herpes zoster, dendritic keratitis); (2) possible allergic states, drug sensitivity, vernal conjunctivitis, episcleritis, marginal corneal ulcers, superficial keratitis, sclerosing keratitis, nonluetic interititial keratitis, uveitis; (3) chemical burns (lime). Non-specific anterior uveitis was benefited in most cases. Anterior uveitis following surgery responded well. Secondary glaucoma associated with uveitis disappeared as the inflammation subsided. Phaco-anaplylaxis, in one case showed a poor response, in the other case responded dramatically after all else had failed.

Schiae, H. G. et al, (Arch Ophth. 34:301, 1951) described a series of patients treated by local instillation of the hormone with the following results.

Anterior Uveitis	Cases	Results
Acute nongranulomatous	3	Remission
Endophthalmitis phaco-anaphylactica	1	Improved
Retained lens material	2	Remission
Posterior Uveitis		
Granulomatous	12	Not improved
Keratitis		
Syphilitis interstitial	2	Remission
Sclerosing	1	Improved
Superficial punctate	2	Remission
Mustard gas	2	Not improved
Non-specific marginal	6	Improved 1, remissions 5.
Keratouveitis, (cause unknown)	3	Improved

Kerato-conjunctivitis		
Chronic staphylococcus sensitivity	5	Remissions 3, improved 2.
Phylyctenular	3	Remissions 2, improved 1.
Stevens-Johnson's Disease	4	Not improved
Blepharoconjunctivitis	8	Remissions 4, improved 4.
Vernal conjunctivitis	5	Remission
Episcleritis	3	Remission

Discussion

FOWLER HOLLABAUGH, M. D., Nashville. Mr. Chairman: To the ophthalmologist cortisone is certainly the most interesting and probably the most valuable therapeutic agent since the advent of the antibiotics. Up to the present time we are probably deriving more benefits than any other group. In attempting to evaluate any new therapeutic agent a number of factors have to be considered. The agent must be used in a sufficient number of cases and for a sufficient period of time. As the essayist said, "one swallow does not make a meal". It must also be determined whether the condition which is being treated would have responded just as quickly without the agent. For example, local drug reactions frequently clear immediately upon withdrawal of the drug. Recurrent marginal ulcers of the cornea will often heal within 48 hours. Striate keratitis following cataract extraction heals without treatment. We have all seen cases of optic neuritis which have cleared in 4-6 weeks spontaneously. It is going to take time to determine if such cases, and many others, are really benefited the hormone systemically and the remaining by cortisone. Accuracy of diagnosis, the enthusiasm of the doctor and the desire of the patient to be benefited, all must be considered.

Generally speaking the conditions which have shown the greatest response to cortisone are episcleritis and scleritis non-granulomatous acute iritis and acute iridocyclitis, forms of keratitis, other than the dystrophies and degenerative condition, optic neuritis and acute choroiditis. In these conditions, in my humble opinion, cortisone should be used without fail. Naturally, I do not mean to imply that the hormone should be used to the exclusion of other necessary agents as atropine, heat, non-specific protein therapy and the like. My personal experience with cortisone has consisted of 43 cases, eleven of which received the hormone systemically and the remaining thirty-two topically. I have had no experience with the subconjunctival injection of the hormone and would appreciate it if the writers would elaborate on this in their closing discussion. My results were almost identical with those reported here with one or two exceptions. Of the eleven patients who received cortisone systemically, there were three with iridocyclitis, one with iritis, two with optic neuritis four cases of choroiditis and one of severe vernal catarrh. One woman with a rather severe recurrent iritis developed a psychosis on the third day of systemic treatment necessitating the withdrawal of the hormone. This was before we were using it topically. It was felt that all were benefited by the hormone with the exception of the vernal catarrah. The most difficult to evaluate were the cases of choroiditis. Of those treated topically, one patient with iritis seemed to derive no benefit whatsoever. One instance of scleritis possibly was benefited only a little. Two cases of vernal catarrah were unimproved. Four corneal dystrophies were unaffected. One severe neurotrophic keratitis cleared within one week; of course, corneal scarring remained. I have seen no cases of interstitial keratitis or phlyctenular kerato-conjunctivitis since the hormone has been available.

I. L. ARNOLD, M. D., Chattanooga. These authors are to be commended for this excellent and timely paper on the use of cortisone in ophthalmology. The results given are very impressive and I believe the drug will help solve many of our difficulties. Our results in it's use have been very similar to those reported in this paper. I would like to mention one case in which we believe cortisone was a great help in therapy.

This was a five year old child who became blind over night. The mother states, that she was perfectly well when she went to bed, but upon arising, it was noted that she ran into the walls. The child was hospitalized at Children's Hospital on September 25, 1950. Examination revealed an optic neuritis, bilaterally, the pupils were very dilated and reacted sluggishly to a very bright light. Physical neurological examination, and X-rays, agglutination and other laboratory procedures were normal. The usual therapy of typhoid vaccine, antibiotics and vitamins was started and continued to October 3, 1950 with no apparent change. No light perception was present. On this date cortisone was started, and within 24 hours there was a definite vision, with fairly accurate light projection and a marked objective improvement of the nerve head. Her improvement gradually increased and cortisone was continued to October 17th. The child was dismissed October 24th. Cortisone was given in a dose of 50 mg. every 8 hours the first day, 50 mg. every 12 hours the second day and then 50 mg. daily. On October 31st there was no reaction whatever around the nerve head. On April 3, 1951, examination revealed vision of 20/30 O. U. We were unable to do fields with any accuracy, the discs were pale and some atrophy was present. I appreciate the opportunity of being able to discuss this paper.

RICHARD A. MILLER, M. D., Memphis. From November 1, 1950 to March 12, 1951, 51 of our patients were treated with Cortisone for various ocular conditions. Of this number 21 have not been seen since the drug was prescribed. Of the remaining 30 who returned 3 were treated for allergic dermatitis of the eyelids by the local application of cortisone ointment or solution, 8 mg./c.c., q.i.d. Two cases showed marked improvement in three days, with clearing in one week. The other case showed no improvement in 3 days, but was continued on with the drug and has not returned in three weeks.

Three cases of allergic or irritative reaction in the conjunctiva were treated with cortisone solution 6 mg./c.c., used as drops q.i.d. Two were completely clear in 2 to 5 days and the remaining patient showed no improvement.

One case of endothelial corneal dystrophy was treated with cortisone drops 6 mg./c.c., q.i.d., without improvement of the dystrophy.

Four patients with disciform keratitis, 3 of whom showed staining of the overlying corneal epithelium were treated with cortisone drops q.i.d. The corneal epithelium of these three healed in from 3 to 6 days but showed no change in the scarring of the stroma. The fourth patient showed marked clearing of the corneal stroma in one week, this lesion was of recent origin, the vision improving from 3/200 to 20/50.

Three cases of episcleritis treated with cortisone drops q.i.d., showed marked improvement within the first 2 days, with complete clearing in from 10 to 14 days.

Seven patients with acute iritis were treated with cortisone drops 6 mg./c.c., q.2.h. Two eyes were clear in 3 days, two in one week, two in two weeks, and one eye showed no improvement after 3 weeks.

One case of keratitis sicca treated with cortisone drops q.i.d. showed no improvement after 2 weeks.

Three patients with sclero-keratitis were treated with cortisone drops 6 mg./c.c., q.i.d. Two eyes showed marked improvement within one week and the other patient, who was put on the drug during an inactive phase of keratitis, has shown no recurrence in 5 months whereas before, she had repeated recurrences every 6 to 8 weeks.

One case of superficial punctate keratitis treated with cortisone drops in the same manner showed complete clearing in 3 days.

One case of herpes zoster of the cornea treated with cortisone drops q.i.d. showed almost complete clearing of the cornea in one week.

One case of pannus degenerativus of the cornea treated with cortisone drops t.i.d., caused disappearance of corneal bullae but no change is substantia propria.

Two cases of optic neuritis were treated with cortisone, one orally and the other intramuscularly. Each patient was given 300 mg. first day, 200 mg. second day and 100 mg. daily thereafter for two and a half weeks. One eye improved from 20/100 J-14 to 20/20 J-1 in 3 weeks, the other improved from 20/200 J-12 to 20/20 J-1 in 5 weeks. Each eye showed a gradual decrease in the inflammatory reaction of and around the disc as the vision improved. Both discs showed residual scarring from the neuritis.

PHIL M. LEWIS, M. D., Memphis. It is now a well established fact that cortisone is a very valuable agent in the treatment of numerous ocular disorders. This has become common knowledge so that practically all ophthalmologists and many general practitioners are using it in inflamed eyes, often without the diagnosis having been made. This leads to careless examinations on the part of some ophthalmologists and actually dangerous practices by the general physician. An example of this is any case of severe iritis that needs not only cortisone, but wide dilation of the pupil with powerful mydriatics at an early stage. Irreparable damage to the eye may occur while cortisone, without mydriatics, is being used. Equally serious or worse damage may occur from treating an acute glaucoma with nothing but cortisone. Therefore, we wish to point out clearly to all general practitioners, that while cortisone does control or even cure many of the inflammatory eye diseases, it should not be used indiscriminately, nor for long, unless improvement is immediate. It is not a "cure all", nor should it supplant an exact diagnosis by a competent ophthalmologist.

Since submitting my list of cases to Dr. King a few weeks ago I have treated an additional ten patients, practically all with benefit. One having acute central choroiditis was hospitalized and improved rapidly on intramuscular injections. In another subacute anterior uveitis with secondary glaucoma was dramatically improved in less than 48 hours. One with epithelial dystrophy reported that her eyes felt better since using cortisone than they had for years.

In an aging population the frequency of heart disease and its termination in congestive failure is a much greater problem now than to the physician of two decades ago. Bronchopneumonia, formerly "the friend of the aged," is now usually defeated by antibiotic therapy so that heart disease and failure may run their natural course. The prognosis in congestive heart failure assumes a new significance.

PROGNOSIS IN CONGESTIVE HEART FAILURE

RICHARD C. SEXTON, JR., M.D.* Memphis, Tenn.

Prognosis in congestive heart failure, like prognosis in other clinical entities, is dependent upon many factors. It should include an attempt to estimate the patient's work capacity and the alteration in living pattern which heart failure entails. Distinction should be made between immediate and distant prognosis.

Although ultimate prognosis must be individualized, certain contextual factors and recent trends and innovations in cardiotherapy justify some generalizations.

Factors of importance in determining prognosis are as follows:

1. Underlying type of heart disease
2. Degree of clinical cardiac enlargement
3. Precipitating cause of failure
4. Presence or absence of complications
5. Socio-economic status of patient
6. Age of patient
7. Response to cardiotherapy
8. Rapidity of onset of failure
9. Psychologic acceptance of disease by patient
10. Natural history of the etiologic type of heart disease

Obviously, several of these factors are operative in every case of congestive failure. The combination or interplay of these factors and their chronologic appearance are important in ultimate prognosis. Thus, a patient beyond the age of 70 with an acute myocardial infarction complicated by congestive failure would present a gloomy immediate prognosis as contrasted to that of a 25-year-old patient with failure due to rheumatic heart disease in whom there is a precipitating or complicating bronchopneumonia.

We shall consider the more important above prognostic factors separately and attempt to assess their relative roles in prognosis.

In 1862, Austin Flint stated that the existence of murmurs indicated lesions and their localization but that valvular insufficiency gave no information as to prognosis.

Among the first attempts to determine prognosis in heart disease was that of R. T. Grant who in 1933 reported the findings in 1,000 "after histories" on men suffering from heart disease who were pensioners of the British government. This study was initiated by Sir Thomas Lewis. These patients were classified according to (1) valve lesion and (2) cardiac failure and enlargement. Cardiac failure and enlargement were found to be more accurate barometers of prognosis than type and nature of valve defect. Cardiac failure was graded by exercise tolerance and venous congestion. Patients with little or no cardiac enlargement and good or fair exercise tolerance had a good prognosis with only one-fifth of them dying during the ten-year period of observation. Of those patients with moderate cardiac enlargement and poor exercise tolerance, half were dead within ten years. Those with marked cardiomegaly had the poorest prognosis. Those with venous congestion had an average life expectancy of two and one-half years.

Grant concluded from this study that cardiac failure and enlargement were more important in foretelling prognosis than the underlying cause of heart disease. Exercise tolerance as determined by history was helpful. Prognosis was less favorable in patients with aortic stenosis and aortic insufficiency, with sudden death occurring with significant frequency in those with aortic stenosis.

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Herman has stated that "the establishment of a precipitating factor is of significance in the prognosis and future management of any patient with cardiovascular breakdown."

The first study on the precipitating causes of congestive heart failure was undertaken by Sodeman and Burch in 1938. In their report, 100 patients with congestive failure in New Orleans were studied.

In three of these patients, a subsequent bout of decompensation had a different precipitating cause. The precipitating mechanisms found in this study were "gradual onset," infection, exercise, pregnancy, rise in blood pressure, psychic trauma, hemorrhage, surgical shock, coitus, heavy meal and alcoholism. An assignable precipitating cause was apparent in 55 of the 104 instances of failure. A gradual onset without apparent precipitating cause occurred in 47 patients. This group constituted the "gradual onset" category. Members of this group showed the poorest response to therapy with 95 percent of them failing to regain sufficient compensation to carry on minimal activity. Seventy-five percent of those in whom a precipitating cause was found were able to compensate sufficiently to permit at least minimal activity. Patients with syphilitic heart disease were notorious in their inability to compensate. Otherwise, etiologic category did not appear to alter prognosis. No instances of mechanical disturbances precipitating failure were observed. This is probably due in part to the small number of patients with rheumatic heart disease studied, which may reflect geographic influences in etiologic distribution of heart disease.

The next and only other serious attempt to assay statistically the underlying causes and precipitating mechanisms in congestive heart failure was undertaken by Boyer, Leach, and White in 1940. In this study, the case histories of 1,000 cases of congestive heart failure were reviewed. Five hundred of these patients were treated in the wards of the Massachusetts General Hospital while the other 500 were seen in private practice. This partition was designed to obtain a cross section of the population and thus abolish the influence of socio-economic factors. The middle class, however, is fairly well represented in both groups. The study was limited for the most part to a consideration of the initial bout of decompensation and, therefore, reflects only immediate prognosis. The patients were classified as (1) those who died either in the hospital or within 3 months after their visit to the hospital or office, (2) those in whom failure remained evident even on only slight activity, (3) those in whom failure was not evident on moderate activity, and (4) those who returned to their former activity without signs of failure.

The underlying causes of heart failure were distributed as follows:

<table>
<tr><th></th><th><i>Ward</i></th><th><i>Private</i></th><th><i>Poor Results</i></th><th><i>Fair and Good Results</i></th></tr>
<tr><td>Rheumatic</td><td>154</td><td>130</td><td>60</td><td>40</td></tr>
<tr><td>Hypertension plus coronary disease</td><td>98</td><td>158</td><td>64</td><td>36</td></tr>
<tr><td>Hypertension</td><td>89</td><td>79</td><td>65</td><td>25</td></tr>
<tr><td>Hypertension with questionable coronary disease</td><td colspan="2">45</td><td></td><td></td></tr>
<tr><td>Coronary disease</td><td>54</td><td>104</td><td>64</td><td>36</td></tr>
<tr><td>Syphilis</td><td colspan="2">30</td><td>59</td><td>41</td></tr>
<tr><td>Cor pulmonale</td><td colspan="2">25</td><td>76</td><td>24</td></tr>
<tr><td>Calcified aortic stenosis</td><td colspan="2">10</td><td></td><td></td></tr>
<tr><td>Congenital</td><td colspan="2">7</td><td>63</td><td>37</td></tr>
<tr><td>Beriberi</td><td colspan="2">1</td><td></td><td></td></tr>
<tr><td>Unknown</td><td>14</td><td>25</td><td>78</td><td>22</td></tr>
</table>

This etiologic distribution demonstrates the frequency of congestive heart failure in adults with congenital malformations and that the less common causes of heart disease, whether infectious, metabolic, hemic or nutritional in origin, are still rare underlying causes of heart disease. Males outnumbered females almost 2 to 1. Rheumatic heart disease was more prevalent in females while syphilitic and coronary heart disease were more prevelant in males. In patients with hypertension and coronary artery disease, males predominated 2 to 1. Failure in uncomplicated hypertension was about equally divided between the two sexes both as regards incidence and outcome.

In this study, obesity was found to contribute to an earlier onset of congestive failure although it did not adversely affect the outcome. Heart failure accompanying or complicating rheumatic fever and acute myocardial infarction yielded a serious prognosis with about 80 percent doing poorly, either dying or remaining in failure on minimal activity.

Roughly 50 percent of the entire group were able to establish "some sort" of compensation.

The prognosis in patients with malignant hypertension, malignant lesions of the lungs and malignant lesions elsewhere who develop congestive failure as a complication was usually that of the primary disease.

The conclusions from this study were that the underlying causes of heart failure in order of frequency were hypertensive heart disease (with and without coronary arteriosclerosis), rheumatic heart disease, coronary arteriosclerosis alone, syphilitic aortitis and cor pulmonale. The common precipitating factors were "gradual onset," auricular flutter or fibrillation, myocardial infarction, respiratory infections, acute rheumatic fever, and pulmonary infarction. The prognosis was believed to be more dependent upon the precipitating cause, age of patient, absence of serious complications and ability to reduce work of heart than upon the underlying cause of heart disease. In general, the prognosis was worse when pulmonary infarction, myocardial infarction and rheumatic fever were the precipitating causes. About 50 percent poor results were noted when auricular fibrillation and respiratory infections were precipitants.

Precipitating mechanisms in congestive heart failure should be looked for with the same avidity that one looks for a precipitating infection in diabetic acidosis. Compensation in patients with minimal cardiac reserve may be liquidated by infectious processes or by inordinate physical or mental stress. In many such instances, the precipitating cause can be removed and compensation re-established. Respiratory infections frequently precede or are concomitant with cardiac failure in elderly patients. The use of newer antibiotics and chemotherapeutic agents have greatly improved prognosis in this group of patients simply by removing with dispatch the precipitating cause.

Cardiac failure may, likewise, be responsible for complications which may be fatal such as acute pulmonary embolism or pneumonia or these processes may be precipitating causes of failure. The use of anticoagulants, early mobilization and rapid compensation should decrease the frequency of these complications. Anemia and thyrotoxicosis are less frequent causes of cardiac failure due to earlier recognition and specific treatment. Here prognosis is generally good unless serious organic heart disease antedates the precipitating cause.

Boyer, Leach, and White state that prognosis can be predicted in part upon the severity of the precipitating cause. For instance, congestive failure following in the wake of a mild respiratory infection usually indicates a poor myocardial reserve. Conversely, failure complicating a protracted infectious illness is apt to denote a fairly good basic cardiac reserve and is less likely to be a major problem when the precipitating cause is removed unless the failure is due to complicating intrinsic cardiac disease such as endocarditis or myocarditis.

Operation in the absence of overt evidence of heart disease seldom precipitates failure as evidenced by only one case in the series reported by Boyer. Here the greatest danger is over zealous administration of fluids. In general, the surgical risk is minimal in those patients who are compensated with relative ease particularly among those patients who have been compensated for several months without breaks in compensation.

Congestive heart failure in pregnancy is usually due to rheumatic heart disease. Bunim reported a series of 205 pregnancies in patients with rheumatic heart disease. In this group, 36 or 17.5 percent developed heart failure during the observed pregnancy. From these observations, he formulated a basic principle "which consisted of establishing the patient's position in the natural course of the disease." Failure occurred usually during the second trimester.

As the incidence of time from the initial episode of rheumatic fever to the observed pregnancy increased, there was a corresponding increase in the incidence of failure. Thirty-seven percent of those who failed had had rheumatic heart disease for over 20 years. Eighty-nine percent of those who had failed during preceding pregnancies failed during the observed pregnancy whereas failure developed in only 12 percent of those who had had no failure during previous pregnancies. Heart size was helpful in anticipating failure but a few patients with as much as 20-30 percent enlargement failed to experience failure. The infant mortality rate was 15 percent in those with failure as contrasted with 6 percent in those without failure and in patients with normal hearts.

In a latter publication, Bunim and Taube state: "In applying this guiding principle, it will be found that such factors as (1) a history of previous failure, (2) diminished cardiac reserve, (3) the presence of auricular fibrillation, (4) long duration of the disease and (5) an enlarged heart, in the order listed, are useful indices that the patient has reached an advanced stage of the disease and, therefore, is a poor risk."

In general, functional classification according to criteria established by the Criteria Committee of the New York Heart Association aid in foretelling prognosis. Patients falling in classes III and IV are poor risks whereas those in I and II entail little risk.

Pregnancy was a precipitating cause in five of the patients reported by Sodeman and Burch. Failure occurred in the third trimester in three and post partum in two. Antecedent vascular disease is usually present in patients in whom failure occurs after delivery.

Other less frequent precipitating causes of congestive heart failure, examples of which I have recently seen, are decompensated hepatic cirrhosis, subacute and acute urinary retention and large doses of estrogenic hormones as given in patients with prostatic carcinoma. In hepatic cirrhosis, the liver loses its capacity to metabolize estrogens with consequent fluid retention, relative hypervolemia and an increased circulatory load. Fluid retention in patients receiving large doses of estrogens is quite similar, except that in these patients the estrogenic substances are exogenous and their concentrations in body tissues and fluids are not dependent upon impaired hepatic function.

In patients with urinary retention in whom cardiac failure supervenes, there is a positive water balance of sufficient magnitude to liquidate the cardiac reserve.

All patients with these less frequent precipitating causes of heart failure which I have seen have had antecedent organic heart disease.

Kampmeier in 1940 reviewed the case histories of 163 patients having syphilitic aortic insufficiency at the Vanderbilt University Hospital. Of these, 54.6 percent were dead within three years of the time the diagnosis was established. This study indicated that prognosis was worse in those patients with frank aortic insufficiency and congestive failure. In addition, it was shown that manual labor was conducive to poor prognosis. The study did not indicate that specific antisyphilitic treatment favorably influenced prognosis and it was concluded that good cardiotherapy was more important than antisyphilitic treatment. The manner in which rapid treatment techniques employing penicillin will affect this conclusion remains to be seen. It appears reasonable to anticipate that rapid treatment of patients with asymptomatic aortic insufficiency may decrease morbidity and increase life expectancy by converting a progressive valvular lesion to a static lesion. This, however, must be evaluated with full allowance for improved cardiotherapy and the possible hazards of fatal Herxheimer reactions and therapeutic paradoxes which rapid therapy with penicillin may entail.

The case histories of 22 consecutive patients who have been admitted to this hospital since January, 1948, because of cardiac insufficiency due to syphilitic heart disease have been reviewed. Several of those had had admissions prior to that time. Approximately one-third of these patients are still living in a fair state of compensation. The average observation period in these patients, at this writing, is 38 months. Most of these patients are colored patients who follow instructions erratically, many of whom continued to work despite the protestations of their physicians. This, we believe, represents a good survival period for this diagnostic and socio-economic category of patients.

Although the prognosis in patients with syphilitic aortic insufficiency is usually thought of as being relatively poor, some recent studies cast some doubt upon this assumption. Reader et al. in 1947 reported their observations in 47 patients with syphilitic heart disease. From this study, they concluded that syphilitic aortic insufficiency may remain in an asymptomatic phase for two to ten years and that the symptomatic phase may last two to fourteen years. It was their contention that cardiac failure in these patients was as amenable to cardiotherapy as that seen in other etiologic types of heart disease.

Improved prognosis in congestive heart failure is rendering it necessary to watch these patients for non-cardiac diseases. It can no longer be assumed that patients with congestive heart failure are going to die from heart disease. This is well illustrated by two of the above twenty-two cases. The first patient, a 52-year-old colored male, was admitted to John Gaston Hospital 29 times between May, 1944, and March, 1951. Death in March, 1951, was due to massive gastrointestinal hemorrhage from an acute gastric ulcer. Another patient, a 58-year-old colored male with syphilitic heart disease, was kept compensated for 18 months. Fourteen months after the onset of congestive failure, a cholecystojejunostomy was done because of carcinoma of the head of the pancreas. He lived fairly comfortably four months after operation and died as a result of the malignancy.

In general, the prognosis in congestive failure is worse in the two extremes of life. This is largely due to the incidence of rheumatic carditis and myocardial infarction among these age groups. In the series reported by Boyer et al., the peak incidence of congestive failure was between the ages of 40 and 70. The outcome was fairly constant for all age groups for all types of heart disease except for three peaks. The children under 10 years of age with rheumatic fever and failure did poorly with a 75 percent mortality. A second peak occurred during the fifth decade. In these the onset was more gradual. The reason for this spurt was not apparent. It is probable that the poor outcome in this group of patients was due to the increased social and economic responsibilities which characterize this era in life. All patients beyond the age of 70 did poorly regardless of underlying cause or precipitating mechanisms. Those with myocardial infarction plus failure had a mortality of 100 percent.

Auricular fibrillation, articular flutter and supra-ventricular tachycardias are better tolerated and are more amenable to therapy in young individuals than are the same disturbances in older individuals with impaired coronary circulation. Thus, in young people with rheumatic heart disease, arrhythmias are less hazardous. It appears that auricular fibrillation with a rapid ventricular rate may occasionally precipitate failure in a normal heart.

The number of patients presumed to die from intractable congestive heart failure is gradually diminishing. Recent studies suggest that profound derangements of electrolyte balances may be present in patients with so-called mercurial fastness or intractable heart failure. Hypochloremic alkalosis has been described as one phase of the salt depletion syndrome. Many other correctable selective electrolyte disturbances are being recognized. It is anticipated that the increased use of the flame photometer and more judicious attention to electrolyte disturbances may almost abolish this category of patients.

The influence of socio-economic factors in determining prognosis is great. The increased life expectancy of the cardiac patient is making it necessary to give greater attention to the economic aspects of the illness. Psychotherapy, occupational therapy and guidance and judicious attention to the work capacity of the patient are assuming increasingly important roles in the care of these patients. Auxiliary social agencies are rendering a valuable service in this arena.

In addition to antibiotics and anticoagulants, other innovations are contributing to an improved prognosis in congestive heart failure.

The availability and liberal use of mercurial diuretic preparations which can be administered by different routes, has contributed immeasurably to the improved prognosis in heart failure. The introduction of cation exchange resins, procaineamide preparations in arrhythmias, availability of foods low in sodium content and salt substitutes, increasing knowledge of electrolyte metabolism, energy saving devices and instructions for the cardiac patient, participation of social welfare agencies in helping patients to adjust to their disease, and the aforementioned factors have all combined to markedly lessen morbidity and increase life expectancy for the cardiac patient.

Summary and Conclusions

Factors of importance in determining prognosis in congestive heart failure have been discussed. The presence of cardiac failure and degree of cardiac enlargement are of more importance in prognosis than the underlying cause of heart disease. The recognition of precipitating causes of congestive heart failure are of great value in prognostication. In general, patients in whom a recognizable precipitating cause is present have a better prognosis than those with no detectable precipitant. Common precipitating causes of heart failure are mechanical disturbances, myocardial infarction, respiratory infections, acute rheumatic fever and pulmonary infarction. In general, prognosis is inversely proportional to the intensity or severity of the precipitating cause.

A poor prognosis is usually connoted by failure complicating, or in association with acute myocardial infarction, acute rheumatic fever, relatively trivial precipitating causes, acute pulmonary embolism, uremia, post-partal era, subacute bacterial endocarditis (either during the active phase of the disease or as a sequela to the valvular deformity which follows sterilization of the lesions) and ventricular arrhythmias.

The use of anticoagulants and antibiotics have indirectly improved prognosis in the cardiac patient. Other innovations, which have contributed to increased expectancy and comfort for the cardiac patient, are mentioned.

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The author describes his experience with an alkaloid of curare administered in repository form in patients having muscular spasm as the result of trauma.

REPOSITORY TUBOCURARINE IN TRAUMA

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The modern use of curare dates back to the early sixteenth century. It has been used in physiological experimentation for nearly a hundred years. But it was not until about 15 years ago that preparations of curare, sufficiently purified for clinical use, became available.

d-Tubocurarine, from the plant *Chondodendron tomentosum*, was introduced into modern medicine by Gill. The formula of the active ingredient of the plant was ascertained through the work of King and Wintersteiner and Dutcher. Burman[1] in 1938 and Bennett[2] in 1939 began using the new preparation as a therapeutic agent in spastic paralytic children. The results convinced Bennett of the safety of this new type of curare (d-tubocurarine) and he began to use it for the softening of the muscle spasms during convulsive shock therapy in psychotic patients. In 1942, Griffith[3] administered a purified curare preparation to a patient under anesthesia. The dramatically successful results led to further trial by other anesthetists, particularly Cullen,[4] and soon its use became widespread.

Bennett[2] reviewed the clinical investigations on curare in organic neurological disorders in 1941 and noted that: curare produced a marked relaxation of rigidity and abolition of involuntary movements in spastic paralysis, athetoid and dystonic states, parkinsonism, hereditary chorea, spasmodic torticollis, status epilepticus, tetanus and hemiballimus. Its action in aqueous solution was transient and fleeting.

Throughout this interesting report of Bennett's appears the theme that a modality for reproducing a sustained curarization would be a valuable aid in the treatment of these conditions. Subsequently Schlesinger[5] introduced a sustained acting curare but this fell short of the fully desirable properties. Unless used with extreme care the reactions with this preparation were unpredictable. These unpredictable reactions, such as uncontrollable release of the alkaloid which produced unexpected, undesirable curare actions, prevented the wider use of an otherwise valuable drug. At a later date Fuller[6] reported on the use of a repository injection of tubocurarine in painful muscle spasm due to traumatic injuries. The action of tubocurarine in the repository menstruum used by Fuller was apparent in 45 minutes, as indicated by relief of pain coincident with relaxation of the spasm. The drug appeared to be safe and provided sustained actions of curare at desirable levels for periods up to 48 hours. In most instances only one injection equivalent to 25 to 32 mg. of tuborurarine sufficed to relieve pain and spasm.

It is well known that muscle spasm is frequently the primary source of pain following acute traumatic injuries and causes the greatest distress to the patient. Even when treatment of the injury itself progresses to the complete satisfaction of the physician, it is often necessary to administer large and repeated doses of narcotics to relieve pain. The usual narcotic analgesics are insufficient in themselves to effect complete relief from pain due to spasm. Fuller's work promised to alleviate this type of pain without the use of the usual narcotics and our experience on the lessened use of narcotics is corroborative of Fuller's report. Our experience indicates that Tubadil was more effective in relieving the type of pain more effectively than narcotics. This is borne out by an examination of the typical cases reported below. In most instances narcotics alone were ineffective, but the pain promptly disappeared following the administration of the tubocurarine. It is apparent that each patient served as his own control in assessment of this factor.

The nature of the medium in which the drug is suspended is of great importance if a sustained, effective and tolerated dose of the tubocurarine is to be obtained. A repository injection of d-tubocurarine for the widest clinical use should have the following properties:

1. The suspension should be stable over a wide range of temperature: there

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should be no separation of menstuum and drug at body temperature.

2. The effectiveness of the preparation should not be destroyed in the presence of moisture.
3. The suspension should be readily transferred to a syringe for administration.
4. The preparation should be sterile.
5. The suspension should give a slow but prolonged release of the alkaloid so that the interval between injections can be made as wide as possible and, most importantly, sporadic release of d-tubocurarine, which may result in respiratory embarrassment, should not occur after deposition of the suspension in muscle tissue.
6. The suspension should be of such a low order of toxicity as to make its use available for ambulatory subjects.

By the recent development of a crystalline d-tubocurarine alkaloid—99 percent pure, and incorporating it in a slow absorption base, capable of delivering a clinically effective dose of curare at a constant rate below the level of subjective symptoms, the above properties have been met. This has been amply proven. The new product produces such an unvarying clinical reaction that doses may be calculated in terms of milligrams of d-tubocurarine per kilogram of body weight instead of the more indirect "head drop units." The product we have been using in this clinic is known as Tubadil.* Each 1 cc. contains 25 mg. of d-tubocurarine. The dosage must be individualized on a basis of 1.25 cc. per 70 kilograms of body weight. The muscle relaxing effort is apparent in 45 minutes and continues for from 12 to 24 hours or more.

Certain measures should be followed to obtain the maximum usefulness of the drug. Anyone who uses it should be familiar with the signs and symptoms of over-curarization and of measures to combat this immediately, even though in our experience these are of a theoretical nature. In the event of annoying side reactions, such as heaviness of the eyelids, diplopia or marked general muscle relaxation, the injection of ½ to 1 cc. of neostigmine is effective. The contraindications to the use of curare-containing drugs are in cases of respiratory deficiencies, pulmonic disorders and renal dysfunctions. It must never be used in cases even suspected of being myasthenia gravis. The dose must be accurately measured before being administered. The drug is administered intramuscularly only in the upper outer quadrant of the buttocks. The total dose is given at the one site. The patient is advised to refrain from excessive muscular activity for several hours after the administration of the drug. External heat must not be applied to the body as this would increase the absorption rate and the site of injection must not be massaged for the same reason. If it is proposed to use the drug over an extended period, it should not be repeated in less than 24 hours. Although the drug has been used in many clinics on an out-patient basis, we have felt it advisable to hospitalize all patients for observation when the drug is used, in order to observe the patient closely. The following cases illustrate the use of repository d-tubocurarine in trauma in this clinic.

Case 1. M.T., age 53, a miner, sustained a severe compressed fracture of the first lumbar vertebrae December 27, 1950, when slate fell on his back in a mine. On admission, he was in shock, in severe pain and had a marked kyphotic deformitory of his spine with marked spasm of the muscles of his back. He was given morphine gr. ½ on admission and Tubadil 1 cc. He received only two injections of narcotics during the first 12 hours. The Tubadil was repeated on the 28th, 24 hours later, and during the remaining hospital stay of 7 days, the patient required no additional narcotics for pain.

Case 2. C.K., age 25, miner, suffered a fractured pelvis and severe contusions of the back and thighs on April 23, 1951, as the result of a mining accident when he was crushed by a loaded coal car. At the time of admission the patient was in moderate shock, was in extreme pain, and all movements of the back and extremities produced excruciating pain. There was marked associated spasms of the muscles of the thigh and of the back. X-ray examination revealed multiple fractures of the pelvis. He was given narcotics for the first 24 hours but continued to have considerable pain and spasm of the muscles during this period. At the end of this time, 1 cc. of Tubadil was given. Thereafter, he required no additional narcotics during the remaining stay in the hospital, and could be turned in bed at the end of the following day, continuing to remain free of pain. He was discharged from the hospital on the fifth hospital day.

Case 3. C.B., 34 years old, a white male, was admitted to the hospital on May 7, 1951. The history indicated that he had fallen one week before and had sustained severe strain to his lower back; he had gradually become unable to walk. He had consulted a chiropractor and was manipulated but the pain persisted. At the time of admission to the hospital, the examination revealed marked spasm of the lumbar muscles on the right side. The right leg was held in semiflexion for relief of pain. He had a positive Kernig sign. He was given 1.25 cc.

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*Manufactured by the Endo Products.

Tubadil and, though he had been instructed to remain in bed, he was out of bed within 12 hours, free of pain and able to walk about. The Tubadil was repeated on the two following days and at no time did the patient require narcotics for pain. He was dismissed ambulatant on the fourth hospital day.

Case 4. D.B.G., age 53, a leather worker, lifted a large bundle of leather and strained his back on October 12, 1950. He was first seen on the 14th, when he was in severe pain, had been unable to sleep and could scarcely walk. There was marked spasm of the lumbar muscles and any attempt at motion of the back produced severe pain. X-ray examination of the spine revealed marked arthritic changes in the lumbar vertebrae. He was hospitalized and given 1 cc. of Tubadil. He was ambulatory and free of pain in 6 hours, and had slept well for the first time in 2 nights. Tubadil was repeated at the end of 24 hours. The patient was discharged from the hospital free of pain and spasm with good motion of the back at the end of 40 hours. At no time did he require narcotics for the relief of pain.

Case 5. J.A.N., age 42 a white female, was admitted to the hospital with a sub-capital fracture of the femur on March 15, 1951. According to the nurse's report she was admitted to the hospital screaming with pain. She was given morphine and 1 cc. of Tubadil, and traction was applied. She required no additional narcotics during the next 72 hours until after the hip was nailed.

Case 6. J.B., age 18, white female, was injured in an automobile accident on January 21, 1951, sustaining a compression fracture of the fifth thoracic vertebra and a fracture of the right ankle. Despite traction and gradual hyperextension of the thoracic spine, she continued to experience severe pain and spasm of the muscles of the neck and required demerol every 3 to 4 hours for the next three days. At the end of 72 hours Tubadil 1 cc. was given and repeated daily for the next 3 days. Twelve hours after the first dose of Tubadil the patient required no additional narcotics and experienced great relief of pain.

Case 7. J.M., age 56, a colored male, sustained a comminuted fracture of the left femur in an automobile accident on February 15, 1951. He was admitted to the hospital in a great deal of pain and given an initial dose of 100 mg. demerol and 1.25 cc. of Tubadil. Traction was begun and the patient required no additional narcotics until after open reduction was carried out 70 hours later.

Case 8. H.A.S., age 60, a laborer, sustained a severe back strain while lifting a heavy weight on September 12, 1950. He was first examined on the 13th. At this time the patient was in severe pain. There was marked spasm of the muscles of the back with severe pain on any attempted motion of the back. He had not slept since he injured his back and had had almost continuous pain. X-ray study of the spine revealed marked arthritic changes in the lumbar vertebrae. He was hospitalized, given complete bed rest and codeine and salicylates for 48 hours without relief. On September 15, 1 cc. of Tubadil was given and he slept well that night. He was out of bed the following morning, free of pain and had considerable improvement in the motion of his back. He was given a second injection of Tubadil 24 hours after the first, and was dismissed the following day, free of pain and with a good range of motion of his back. Three hours after the first injection of Tubadil he required no additional narcotics for pain.

Case 9. M.D., age 47, a miner, sustained severe compression fractures of the twelfth thoracic and the first lumbar vertebra on December 15, 1950, when a tunnel caved in in the mine. He was admitted to the hospital in severe pain and with marked spasm of the muscles of the back. He was given morphine immediately and Tubadil 1 cc., which was repeated daily for the next 4 days. The patient required only 2 injections of narcotics for pain during these five days.

Case 10. C.G., age 53, sustained a compression fracture of the first lumbar vertebra when a mine tunnel caved in on December 13, 1950. He was admitted to the hospital in severe pain, given morphine, gr. 1/4 and Tubadil 1 cc. There was considerable associated muscle spasm. The Tubadil was repeated daily for the next three days. Altogether in 4 days of hospitalization he required only 3 doses of narcotics for pain.

Summary and Conclusions

1. The development of the use of repository d-tubocurarine has been discussed.

2. The properties of an ideal preparation to be usel clinically have been stated.

3. Dosage, mode of administration and contraindications have been discussed.

4. Cases illustrating its use in orthopedic conditions have been described.

5. Repository d-tubocurarine is a safe and valuable adjunct in the treatment of certain types of traumatic injuries. The amount of narcotics required for the relief of pain is considerably reduced or entirely obviated.

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CASE REPORT
DISSEMINATED HISTOPLASMOSIS*

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"Published with permission of the Chief Medical Director, Department of Medicine and Surgery, Veterans Administration, who assumes no responsibility for the opinions expressed or the conclusions drawn by the author(s)."

This 31-year-old white salesman (R.C.E.) was admitted to Thayer Veterans Administration Hospital, Nashville, Tenn., December 28, 1950, having been a patient at another hospital in the city from November 16, 1950, until December 15, 1950.

Clinical Summary: He was in good health until the latter part of August, 1950, when a low grade fever developed. This was accompanied with anorexia and gradual weight loss, in association with intermittent chills and loose stools. A physician in Florida attended him and thought that he had an upper respiratory tract infection. On his return to Tennessee, the above complaints continued, but the loose stools abated. Medical attention was sought again and aureomycin was prescribed. By the end of two weeks the chills and fever had subsided. He did well until the second week of November when fever was again developed, followed by pain in the right lower lateral chest. A Nashville internist saw him and noted fullness of the abdomen and enlargement of the spleen and liver. The following week, November 16, 1950, he was hospitalized, and an extensive case study was done as summarized below.

Laboratory Studies:
RBC: 4,200,000
WBC: 4,900
Hb: 12:5 Gm.
PCV: 42%
Sed. rate: 35/27 mm/hr.
Kahn: Negative

Differential:
Monocytes: 11%
Lymphocytes: 10%
Eosinophils: 6%
Segmented: 58%
Stabs: 14%
Juvenile: 1%

Cephalin Flocculation: 3+, 4+
Alkaline Phosphatase: K.A. 39 U.
Serum Protein Total: 7.7 Gm.% (Alb. 4.0; Glob. 3.7)
Sputum examination: Negative for pathogens
Agglutination tests: Negative for typhoid, paratyphoid, brucella, proteus, tularense, cold heterophile
Urine: Negative
Stool: Negative for ova, amoeba, and parasites
Bone marrow: Normal constituents
Blood smear: Negative for malaria and other parasites
Blood smear, buffy layer: Negative for parasites
Blood culture: Repeatedly negative
Bone marrow cultures: Negative
Rectal smear: Negative for pathogenic and parasitic organisms

Progress: The patient was placed at various times on streptomycin, aureomycin, penicillin and chloromycetin, without results.

In the early part of December, 1950, an exploratory laparotomy was performed with negative results except to verify an enlarged spleen and liver. A liver biopsy was taken which was interpreted as being compatible with some diffuse granulomatous lesion. A collagen disease was suspected. The patient was placed on cortisone (100 mgm. daily). He received this for two weeks, from December 7 to December 21. On December 15, he was sent home, being considered improved. He had become completely asymptomatic without fever or chest pain. His appetite had returned and he gained weight. His condition remained stationary until December 27, 1950, when fever recurred, associated with headaches and loose stools. Admission was then sought to the Thayer VA Hospital. On the second day after admission a report was obtained from the first hospital that *Histoplasma capsulatum* had been obtained from the bone marrow culture.

Physical examination upon this admission revealed a fairly well developed, though somewhat poorly nourished, patient. A history of a 30-pound weight loss during the period of his illness was obtained.‡

The laboratory findings were for the most part the same as those noted during his previous hospitalization. Skin tests were negative, but a complement fixation test for *Histoplasma capsulatum* was positive 1:320.

The organisms were identified directly from the bone marrow preparation and rectal smear. They were also cultured from the bone marrow.

It is to be noted that the laboratory studies performed at the time of the patient's first hospitalization failed to reveal the presence of any pathogenic or parasitic organism. A search was made for *Histoplasma capsulatum.* The first concrete evidence that this organism was the cause of his clinical picture was the report obtained from the first hospital laboratory. This is not unusual as the culture growth would take at least four weeks for complete growth.

Course in the Hospital: He had a spiking type of temperature with peaks as high as 104°, pulse range of 70 to 110 and respirations of 25-30 per minute.

He was placed on ethyl vanillate, 4 Gm. q. 4 hrs. on January 10, 1951. The dose was increased in a week to 5 Gm. q. 4 hrs., and finally to 7 Gm. q. 4 hrs. He never attained a satisfactory sustained blood level of the drug. The blood levels were usually about 20 mg.%, with one reading January 31, 1951, of 40 mg. per cent. Urine studies were normal. It was noted that he developed a gradual anemia which in part was combatted by transfusions. Anorexia continued and progressed with an increase in his weight loss. The diarrhea continued unabated, and on January 13 bloody stools were noted. Proctoscopic examination revealed innumerable polypoid masses estimated to range from 8-15 mm. in diameter and elevated about 5 mm. The entire mucosa was studded with small, umbilicated ulcers ranging from 2-5 mm. in diameter which bled freely. The spleen and liver progressively enlarged. The patient continued on a downhill course. He became disoriented and semicomatose on February 4 and expired on February 5, 1951.

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*Presented before the Radiological Section of the Tennessee State Medical Society April 10, 1951.

†From the Department of Radiology, Thayer Veterans Administration Hospital, with acknowledgment to Dr. John H. Beveridge, Staff Radiologist, who performed the colon examination.

‡Courtesy of Dr. Richard France, Chief of the **Medical Service.**

Necropsy Examination reveals an emaciated white male. Ulcerations are found throughout the entire intestinal tract, viz., jejunum, ileum and colon. They are more pronounced in the rectosigmoid colon. There is a fairly even distribution of mucosal ulceration throughout these lower intestinal segments with moderate surrounding hyperplasia. Normal mucosa is quite scant. Myriads of organisms are identified in the microscopic sections of the ulcers and surrounding tissue.

The organisms were found in the spleen, liver, adrenal and abdominal lymph nodes but not in the lung. Positive cultures for histoplasma were obtained from the bone marrow. Similarly, direct smears of the intestinal tract were also positive, as shown in Fig. 1.

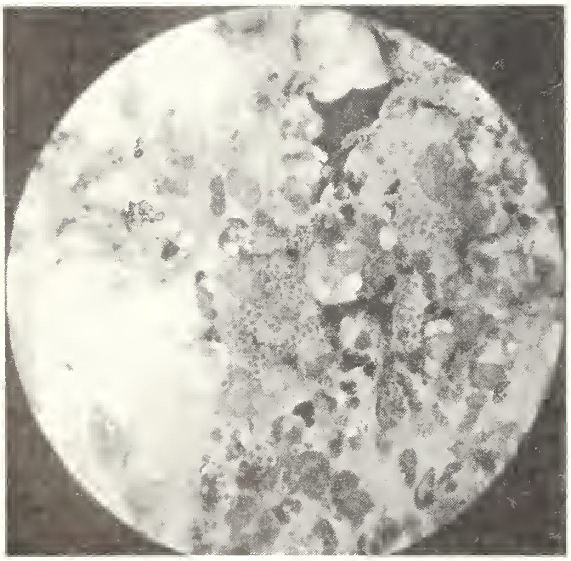

Fig. 1. Microscopic Examination: Photograph of high power microscopic field obtained from smear of rectum reveals innumerable, dense intra-cellular organisms, typical of histoplasma capsulatum. (Courtesy of Dr. Stewart H. Auerbach, Chief of the Pathological Service.)

Comment

The purpose of this case report is to set forth the ante-mortem finding of intestinal mucosal damage, with evidence of edema and early ulceration, in a patient having diffuse visceral histoplasmosis. This affords another disease in the differential diagnosis of colonic mucosal ulcerations. Since ulcerations were found throughout the small bowel at necropsy, there is provided another cause for an abnormal small bowel pattern. However, in this case a barium small bowel study was not obtained, but enough barium reflowed into the terminal ileum to reveal an abnormal lumen. The change which was identified was sufficient to indicate a granulomatous enteritis which might have been a non-specific ileitis or possibly one of tuberculous origin. (Fig. 2.)

A considerable number of papers have appeared and continue to appear in the literature concerning the various manifestations of histoplasmosis. DeMonbreun[8] produced alimentary tract ulceration and mesenteric lymphadenopathy following trans-oral administration of the fungus in an experimental animal. Subsequently the organism was recovered and cultured from the lesions of the host.[9]

Several reports have appeared which noted the finding of intestinal tract ulcerations at autopsy.[1-5] Ulcerations have been found scattered throughout the entire alimentary tract from the mouth and oropharynx to the anus and rectum. The fungus of histoplasmosis has been reported as a common finding in the appendix and mesenteric lymph nodes following routine appendectomies.[6]

I have had the opportunity within the last year of seeing two interesting cases. One presented an indurated ulcer of the floor of the mouth with involvement of the posterolateral margin of the tongue. Clinically, this was thought to be malignant. The second patient showed a shallow ulcer in the posterolateral oropharynx. This was considered to be tuberculous. However, cultural and biopsy studies revealed the organism of histoplasmosis in both instances.

Similarly, in this reported case the intestinal findings suggested an early ulcerative colitis with involvement of the terminal ileum. To be considered in the differential diagnosis was tuberculosis, ileitis or non-specific enteritis with ulcerative colitis. The pulmonary radiographic changes could be interpreted as being compatible with sar-

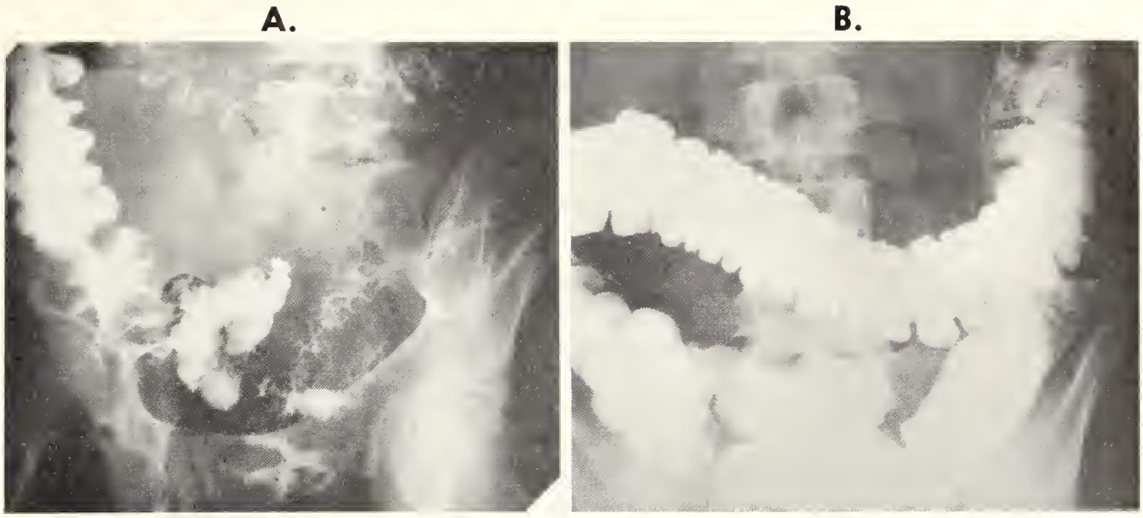

Fig. 2. A & B. Barium Enema (1-2-51: Barium filled the colon readily with visualization of the ileum. Considerable irritability was noted in the sigmoid and ascending colon. There was tenderness to pressure over the right colon. In the filled state, the barium column possessed a fuzzy, irregular, and somewhat serrated appearance. There was a coarse, irregular pattern of the terminal ileum. (The expulsion radiograph indicated edema. The mucosa appeared broadened and irregular, suggesting early ulceration.) The final impression on the barium enema examination was diffuse, early, colonic ulceration, associated with mucosal edema. There was a bizarre, irregular appearance of the terminal ileum which would indicate a granulomatous enteritis, most likely accompanying the ulcerative changes in the colon.

coidosis, periarteritis nodosa or an interstitial pneumonitis with pleural reaction. (Fig. 3.)

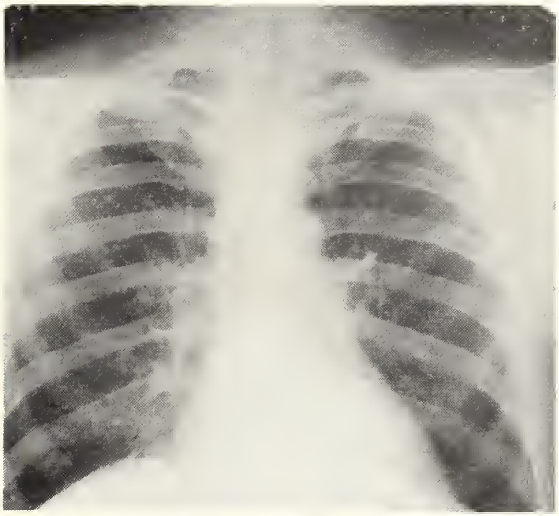

Fig. 3. P.A. Chest (12-28-50): Radiograph reveals matting and thickening of each root and hilum. There is blunting of each costophrenic angle associated with pleural bands. The lung markings are accentuated in each mesial lung zone associated with linear zones of minimal infiltrate. A collection of lymph nodes is noted in the upper right mediastinum just adjacent to the arch of the aorta.

It is to be noted that histoplasmosis may be localized or diffuse, and its manifestations may be protean in any one individual. It may be acute or chronic, and may affect any age group. The chief clinical findings are weakness, weight loss, fever, diarrhea, anemia, leukopenia, splenomegaly and progressive cachexia. The portals of entry of the fungus are skin, lung, oral cavity and alimentary tract. The diagnosis is to be made by keeping this in mind. When confronted with oral or anal ulcerations the physician must consider histoplasmosis. If the presenting complaints of a patient are bizarre, associated with splenomegaly pulmonary changes which are not typical of a common infection, plus gastro-intestinal disturbances, the diagnosis of histoplasmosis should be entertained.

Recourse to laboratory studies of fluid smears, blood cultures, tissue biopsy studies and bone marrow culture may eventuate in establishing the diagnosis of *Histoplasma capsulatum*. The yeast is identified as an intra-cellular refractile body in direct smears. Skin sensitivity tests are also helpful in establishing the identity of this disease.

In this reported case, the diagnosis was made by examining the tissue and bone marrow cultures at the end of the fourth week period. Many times such cultures are discarded if no growth appears by the second week. It is not the writer's intent to say that histoplasmosis is a radiographic diagnosis. Radiographically, colonic ulcerations and ileitis were demonstrated. These did not fit the usual roentgenologic picture of non-specific, amoebic, or tuberculous colitis and enteritis. When this was assayed with the pleuro-pulmonary changes it became evident that some other diffuse, infectious origin had to be sought.

An exhaustive survey was made of the literature in an attempt to ascertain whether small or large bowel changes were found by radiographic studies in the ante-mortem period in a patient having histoplasmosis. Such a reference was not found.

Summary

It is thought that this is the first case report in which radiographic studies by barium contrast examination revealed the presence of colonic ulceration associated with ileitis in a case of diffuse histoplasmosis proven clinically and pathologically.

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In almost every field of medicine the general practitioner will encounter problems of diagnostic and therapeutic management. Your editor will select essayists who, from their own experience, can briefly set down the answers to some of these questions which trouble the physician.

COMPLICATIONS OF INSULIN THERAPY

ADDISON B. SCOVILLE, JR., M.D., Nashville, Tenn.

PREFERRED PROCEDURES

The use of insulin in the treatment of diabetes mellitus during the past thirty years has brought to light a number of interesting complications of therapy which should be recognized by all physicians using this life-saving hormone.

Allergic Reaction

Local reactions at the site of insulin injection, believed to be allergic, are common when protamine zinc insulin is used but are unusual when rapidly acting or globin insulin is given. The symptoms are swelling, redness, itching and tenderness, appearing from two to twelve hours after injection and subsiding in two to four days. Occasionally, these reactions are seen in various stages of progression and regression in sensitive individuals. They do not indicate a change of therapy as they usually disappear spontaneously in the first week or two of treatment.

Allergic reactions to insulin fortunately are rare. More commonly, sensitivity to the specific animal protein is noted and can be corrected by changing from pork to beef insulin. Sensitivity to protamine zinc insulin is most common and may, as described above, disappear spontaneously or, if persistent, globin insulin may be substituted. (It is to be hoped that recrystallized mixed beef and pork insulin will be made available commercially since recent work indicates that antigenic impurities are removed in this process.)

Sensitivity to insulin protein does occur. The diabetes in such individuals, if obese, may be controlled by diet and weight reduction. However, it is probable that every diabetic will develop infections or complications and thus need insulin at some time in life. Rapid desensitization is most important and may be life-saving in diabetics with severe infections or coma. A satisfactory method is the injection of minute amounts of regular insulin beginning with 1/1000 of a unit and doubling the dose every 10-20 minutes until therapeutic amounts can be given. If untoward local reactions occur, the previous dose is repeated and then increases are begun again. If such desensitization is necessary, the continued use of insulin is imperative to prevent the return of the sensitive state. In the obese diabetic one injection a week will suffice, while in thin diabetics daily injection are necessary. The use of epinephrine, ephedrine and anti-histaminics may be used when angioneurotic edema, joint pains and local reactions are encountered.

Water Imbalance

The rapid control of a severe diabetic state may cause a tremendous increase in body weight due to retention of water. This may be manifest by weight increases of as much as twenty pounds during the first week of therapy. As balance is re-established this excess weight is lost. The insulin facies, most frequently seen in young females, is characterized by a filling out and rounding of the face, loss of wrinkles, a waxy appearance and loss of facial expression. This is also a manifestation of water retention and will disappear spontaneously. Occasionally ankle edema may be discovered during this same period, and if one can be certain that it is not part of Kimmelstiel-Wilson's (intercapillary glomerulofibrosis) disease no particular significance need be attached to it. Rarely is salt restriction and ammonium chloride necessary to remove the edema.

One of the most frequent complications noted not only in the newly treated diabetic but also in the poorly controlled diabetic being brought under a good regime is transient bilateral presbyopia. This difficulty in focusing on near objects has been blamed on the loss of elasticity of the lens and is probably the result of a disturbance in the osmotic pressure in the tissues of the lens and the circulating fluids. It is transitory and patients should be assured that the vision will return to its former state. If work is impossible due to the visual defect a pair of cheap magnifying glasses obtained at the "dime store' will suffice for the two or three weeks of disturbed vision. In this regard it is wise to advise all diabetic patients that glasses should be fitted only when their disease is under good control since presbyopia may recur with hyperglycemia and glycosuria.

Fat Dystrophies

When insulin is injected into the same area frequently local painless "insulin tumefactions" appear which are "rubbery" and over which the skin is adherent to the subcutaneous tissues. The skin and subcutaneous tissues of such areas are peculiarly insensitive to pain and therefore patients, especially children, prefer their injections in these localized swellings. Since absorption is poor and unpredictable from such areas this practice should be discouraged. These swellings should be avoided and future injections of insulin be given so that no spot is used more frequently than every two or three weeks. An anatomic map to mark the sites for injection is an excellent way to avoid frequent re-injections at the same area and appeals to children.

One of the most distressing effects of insulin therapy is fat atrophy. This atrophy of the subcutaneous tissues occurs not uncommonly in children of both sexes and in young female adults. There are concave depressions in areas where insulin has been injected over a period of weeks to years. The cause of the atrophy is unknown but apparently is not the result of insulin alone since patients with diabetes insipidus may experience the same type of atrophy with pituitrin. Various measures to avoid this have been suggested, such as shifting the sites of injection to less conspicuous parts of the body, changing brands of insulin, re-injection of the atrophied areas, and more recently the injection of insulin kept at room temperature. The age and sex factors have suggested that androgens may exert a protective mechanism, but the lack of subcutaneous tissues in most males may account for the sex predilection.

Insulin Resistance

Rarely a patient is encountered who requires large amounts of insulin, 200 or more units per day, for control of his diabetes. Acidosis is one of the frequent causes of resistance and it has been suggested that infrequent small doses of insulin during the early treatment of acidosis may predispose the patient to insulin resistance. Infections, more commonly acute, and destructive lesions of the liver and pancreas have also been implicated in producing insulin resistance. Diseases which produce hypersecretion of anterior pituitary and adrenal cortical hormones may also affect the patient's sensitivity to insulin. Many cases, even at autopsy, fail to reveal the cause of resistance. An immunologic explanation has been offered with the demonstration of neutralizing antibodies to crystalline insulin in some patients. Recognition of this peculiar resistance to insulin, treatment of any infection, and the use of large amounts of insulin usually result in successful control of these patients.

Hypoglycemic Reactions

Hypoglycemic reactions occur when the blood sugar falls below normal levels, usually below 60 mg. per 100 cc. The fundamental causes are either too much insulin or too little food. However, among the many predisposing factors the most important is related to exercise. Physical exertion has a blood-sugar-lowering effect and if the exertion is greater than usual may produce hypoglycemia. Patients should be told to *anticipate reactions* by ingesting supplementary food prior to the extra exertion. Experience teaches the intelligent patient the quantity of food necessary for a game of golf or for doing Monday's laundry. At the cessation of pregnancy the insulin requirement drops precipitously and allowance must be made for this in caring for the pregnant diabetic. The lowered insulin requirement continues for three or four days and then returns to the prepregnancy level. Other causes of hypoglycemia are faulty distribution of diet, vomiting, improper timing of insulin injections, improved carbohydrate tolerance, loss of weight and correction of thyrotoxicosis.

Insulin dosage should be decreased if it is felt that the patient is receiving too much insulin. However, reactions due to this cause occur daily whereas occasional reactions are usually due to an unusual amount of exertion or improper eating. Many of these latter reactions can be avoided by stressing correct eating habits and teaching patients to anticipate reactions by supplementary feedings *before* undertaking unusual exertion.

Recognition of these complications and their successful management will enable the physician to better treat and control the diabetic who needs insulin for proper control of his disease.

The Use of Local Anesthesia in Delivery, Brougher, J. C., Ann. West. Med. & Surg., 5:217, 1951.

Although anesthesia is a distinct blessing to women in labor, there are dangers associated with every type of anesthetic used. Local anesthesia is undoubtedly the safest. The technic should be familiar to every obstetrician for use when he feels it may be indicated. A more widespread use of local block will reduce both the maternal and the fetal mortality and morbidity.

In an effort to approach the irreducible minimum of maternal deaths, the author has employed local anesthesia since March, 1948. This report covers a review of 750 patients in whom local anesthesia was studied. In 22 percent of these, labor progressed too rapidly or the patient was too excited from the analgesia to permit making the injection, thus eliminating 165 patients from the group. Thirteen patients were delivered by cesarean section, giving an incidence of 1.7 percent.

Novocain block is administered just prior to delivery while the patient receives nitrous oxide. Injection of 6 to 8 cc. of 1% novocain solution is then made just medial and inferior to the left ischial tuberosity, with the novocain deposited in the region of the pudendal nerve. On withdrawing the needle, 2 to 3 cc. of novocain is deposited in the region of the perineal branch of the posterior cutaneous nerve about one inch under the skin. The syringe is disconnected from the needle, filled with 10 cc. of novocain and injected in the region of the ilioinguinal nerve under the left pubic ramus with the left index finger held in the vagina as a guide to the needle. Another injection of 10 cc. more of the solution is used in the para-anal region to block the inferior hemorrhoidal nerve. In the three locations on both the left and right sides of the vagina, not only is novocain injected for a nerve block but some solution is deposited as the needle is slowly withdrawn, thus performing a paravaginal infiltration.

There is a noticeable relaxation of the perineum and a cessation of the patient's tendency to move with her pains after the novocain has been injected. Nitrous oxide can usually be discontinued and delivery may proceed naturally. Oxygen is given to the patient. This has another advantage, namely, of keeping the mask on for further gas inhalation if it is necessary for operative procedure or for expression of the placenta. If outlet forceps, Kielland, or other operative procedures are decided upon, the patient is given a little nitrous oxide and oxygen. After the blades are applied, the nitrous oxide is again discontinued, but oxygen administration proceeds. For the delivery and episiotomy repair 94% of the patients received no further inhalation anesthesia; 10% required a little nitrous oxide for expulsion of the placenta.

No hemorrhages of a severe nature occurred at the time of delivery and the bleeding was definitely less than under general anesthesia. The complications in this series consisted of one hematoma of the episiotomy with wound separation and three minor hematomas without impairment of wound healing. There is more perineal discoloration from minor subcutaneous ecchymoses than in the patient in whom local analgesia has not been used. No infections or abscesses have occurred.

Fetal deaths numbered 12 or 0.016 percent. There were 17 stillborn babies, or 0.022 percent. No babies were born with asphyxia pallidum. The anesthetist classified 75% of the babies as pink and 25% as blue. (Abstracted by Milton Smith Lewis, M.D., Nashville, Tenn.)

STAFF CONFERENCE

Department of Surgery, University of Tennessee College of Medicine*

DR. HARWELL WILSON: The first case for consideration is interesting because of the problems it presents as regards diagnosis and treatment. This patient on admission gave evidence of having a serious vascular lesion in the left lower extremity and for some time it was difficult to determine whether or not we would be able to save the limb of this patient.

Dr. Benton, since you are the assistant resident who has followed this patient, I would like for you to present this case to the group for discussion.

DR. B. F. BENTON: This 36-year-old colored male truck driver was admitted to the hospital on September 25, 1951, with a history of sharp, sudden pain beginning in the left thigh 36 hours before and soon followed by coldness, numbness, and cyanosis. There was no past history of any serious illnesses, including rheumatic fever or heart disease. However, there was a history of occasional joint pains. In 1947, the patient was hospitalized for treatment of an ice pick stab wound of the right upper chest near the midline. One year prior to admission the patient had sustained a stab wound with a knife on the anterio-lateral aspect of the left buttock and had been treated on an outpatient status. Two weeks prior to the onset of the present illness he had experienced malaise for three days, followed by mild left lower chest pain of about six hours' duration, but with no cough until two days later when on arising he expectorated a very small amount of blood-tinged sputum.

On physical examination the temperature was 100 F., pulse 104, respiration 22 and blood pressure 100/70. The patient was a well developed, well nourished, alert colored male who complained of pain in the left thigh. The physical examination was essentially negative except for the findings in the left lower extremity. The left thigh appeared slightly swollen in its superior and anterio-lateral aspect; it measured $1\frac{1}{2}$ inches larger in circumference than the right. The left thigh was tender and the entire left lower extremity was much cooler than the right. Diffuse cyanosis of the left lower extremity was present and sensation was diminished in the left leg. The left femoral pulse was diminished; left popliteal, dorsalis pedis, and posterior tibial pulses were absent. Blood pressure in the right popliteal area was 104/70, but none was obtainable on the left side. Admission laboratory findings were all within normal limits except the white blood count which was 22,400. Chest X-ray showed slight pleural thickening at the left base and slight elevation of the left diaphragm. X-rays of the left lower extremity were negative.

DR. WILSON: Thank you, Dr. Benton. You have just given us a complete history, but I would like to ask one or two questions before we discuss this any further. You mentioned that this patient's complaints were limited to the left lower extremity and you stated that he had pain in the left thigh, that cyanosis of the left lower extremity was present. The peripheral pulse was said to be absent in the left leg. I would like for you to clarify for the group the extent of the pain. Was the patient complaining of any excruciating pain in the left leg when he was admitted to the hospital?

DR. BENTON: The pain appeared to be only moderately severe. However, the patient had requested medication for relief of pain.

DR. WILSON: Tell us the exact location of the pain and what radiation of the pain, if any, was present.

DR. BENTON: The pain appeared to be in the upper part of the left thigh in its anterio-lateral aspect.

DR. WILSON: Was this man complaining of pain in the left calf and foot when he was admitted?

DR. BENTON: No, sir, none whatsoever.

DR. WILSON: Dr. Smythe, I believe you were the associate resident on duty when this patient was admitted. Tell us what you considered as the most likely diagnosis when you saw this patient.

DR. FRANK SMYTHE, JR.: This man obviously had acute vascular difficulties involving the left leg and I thought the differential diagnosis lay between reflex arterial spasm from trauma, massive thrombophlebitis and arterial embolus.

DR. WILSON: Which of the three at the time of admission did you think was more likely?

DR. SMYTHE: In view of the man's work and the progression of the symptoms over a period of six hours, I thought the first one was more likely.

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*From the Department of Surgery, University of Tennessee, College of Medicine, and John Gaston Hospital, Memphis, Tenn.

DR. WILSON: Dr. Benton, I believe that you asked Dr. Hardy, the attending surgeon in charge of the emergency cases, to see this man early in the morning. Was there any significant change in the patient's condition between the time of admission and the time you asked Dr. Hardy to see him?

DR. BENTON: Before we had Dr. Hardy see this patient a paravertebral sympathetic block had been done with only mild improvement of symptoms and within a few hours the extremity presented the same picture as it had on admission, namely, it was cold and cyanotic. It was at this time that Dr. Hardy saw the patient.

DR. WILSON: Dr. Hardy saw the patient in the early morning, and agreed that it was not only an interesting but a serious problem and asked me to see him a little later in the morning. Dr. Hardy, would you give us the impression which you obtained from your initial examination of this patient when you saw him?

DR. JAMES D. HARDY: When I first examined the patient his left foot was cold, cyanotic and pulseless. Although I had thought from an earlier telephone conversation that this represented venous disease with arterial spasm, I felt certain upon actually examining the patient that arterial occlusion caused by embolism was the most likely diagnosis.

DR. WILSON: When I saw this patient with Dr. Hardy and Dr. Benton it appeared to me also that the patient had probably had an embolus to the left femoral artery. Forty-five minutes before I saw the patient, however, Dr. Benton had performed a second paravertebral lumber sympathetic block with novacain and, although the peripheral pulse was absent in the popliteal region and in the foot, the temperature of the foot had improved and it appeared that the circulation was such that gangrene would not occur. I therefore did not feel that embolectomy was indicated, especially since the process had begun approximately 40 hours before. It would appear then that the diagnosis of embolus was easily established but this is not true. Dr. Bushart, I believe that in the following two days a number of staff members who saw the patient felt that the diagnosis of massive phlebitis with secondary arterial spasm was the more likely one. Tell us what this opinion was based upon.

DR. JAMES H. BUSHART (Chief Resident): This opinion was based chiefly upon a slightly perceptible posterial anterior tibial pulse and an increasing edema of the lower leg. It was suggested by the attending staff that we elevate the lower extremity. This was done and slight improvement was noticed. This further substantiates the opinion that we were dealing with a venous obstruction.

DR. WILSON: Dr. Dunavant, do you have any comments you would like to add to the discussion at this time?

DR. W. D. DUNAVANT: After talking to Dr. Hardy about this patient, I felt that he had probably had a pseudo-embolectic phlebitis or a phlegmasia cerulea dolens.

DR. WILSON: Dr. Tyson, Dr. Dunavant has raised the question whether this might be phlegmasia cerulea dolens. This of course is a very unusual but exceedingly important type of thrombophlebitis, and since you have recently reviewed the literature on this problem, I would appreciate it if you would give us a few remarks regarding the condition and whether or not it seems applicable to this patient.

DR. WILLIAM TYSON: The clinical manifestation of phlegmasia cerulea dolens very closely simulate acute arterial embolism. The onset of the disease is sudden and the pain quite severe. The extremity becomes rapidly swollen, cold and cyanotic. In approximately two-thirds of the cases peripheral pulsations cannot be felt owing to the severe arterial spasm and edema. Response to sympathetic injections is usually not dramatic. The pathology consists of massive thrombosis of the entire venous system of the extremity with associated arterial spasm which may result in gangrene.

DR. WILSON: Dr. Hardy, all of us, I believe, have at times varied in our opinion regarding the exact type of vascular lesion which this patient experienced but I believe that you have established the diagnosis by making an arteriogram. I wish that you would present the arteriogram to the group and give us your current interpretation of the problem. First tell us exactly how you made the arteriogram.

DR. HARDY: The arteriogram was performed in the following manner. After first occluding the left femoral artery just distal to the inguinal ligament with digital compression, we injected approximately 50 cc. of 35% diodrast through the previously inserted number 20 needle distal to the point of occlusion. The radiologist took two films in rapid succession. Occlusion of the artery allowed the diodrast concentration in the upper portion of the femoral artery to be dissipated more slowly than of course would be the case had compression of the artery not been used.

DR. WILSON: Now demonstrate the film and tell us exactly what it shows.

DR. HARDY: If my interpretation of the film is the correct one, and I believe it is, there is demonstrated occlusion of the femoral artery at the level of the profunda femoris.

DR. WILSON: It appears then that this patient would have an embolus but we are still unable to establish a diagnosis of heart disease which would make an embolus more likely to occur. Dr. Benton, the members of the medical department have studied this patient. Did the cardiologist find any evidence of heart disease which would make the occurrence of embolus seem likely?

DR. BENTON: No, they did not present any definite evidence that would make this seem more likely.

DR. WILSON: Dr. Dunavant, would you continue the discussion?

DR. DUNAVANT: I would like to ask a question. In view of the history of pain in the chest and hemoptysis two weeks ago and the fact that approximately half the cases of phlegmasia cerulea dolens develop gangrene of the extremity, do you think that the block shown on the arteriogram rules out the fact that the primary pathology is in the venous system?

DR. WILSON: No, Dr. Dunavant; while I frankly believe that this patient most likely had an embolus, I do not believe that the arteriogram alone establishes the diagnosis beyond a question. I also feel that the fact that no heart disease has been established does not rule out the possibility of arterial embolus. I have had occasion to remove an aortic embolus from an individual in whom we were never able to find any evidence of heart disease. Tell us, Dr. Hardy, the results of the venogram on this patient. Perhaps this will give us light on Dr. Dunavant's question.

DR. HARDY: The only light which the venogram sheds on this subject is the fact that no occlusion of the veins visualized is noted. A venogram which exhibits positive findings of occlusion of the veins visualized is noteworthy. A venogram which exhibits possible findings of occlusion or incompetency of valves is helpful, but one which exhibits no positive findings does not necessarily mean that the expected pathology might not have been present.

DR. DUNAVANT: I do not know of any arteriograms or venograms which have been done in patients with cerulea dolens, but I should think that a negative venogram would rule it out.

DR. WILSON: It was mentioned earlier in the presentation that there was some discussion regarding local treatment of this extremity. Tell us, Dr. Farringer, what you feel is the proper attitude as regards the use of elevation and the local application of heat to an extremity which has been deprived of its arterial blood supply.

DR. J. L. FARRINGER: I believe that the elevation of the extremity with impaired arterial circulation is contraindicated because it would throw an additional obstacle in way of the flow of blood to the more distal parts and, similarly, the application of heat is contraindicated because it would increase the metabolism of the tissues which are already suffering from oxygen defect.

DR. WILSON: I think your point is well taken, Dr. Farringer. As regards elevation usually the circulation of the extremity is better when the foot is kept two or three inches below the level of the heart. Certainly it is unwise to apply heat to a part of the body deprived of its normal arterial supply. In thrombophlebitis, however, all of us agree that elevation is helpful in overcoming edema.

This patient now has no problem as regards threatened gangrene but he may develop troublesome signs of arterial deficiency, such as intermittent claudication, because of the obstruction in the artery. Dr. Smythe, if in future weeks this man does experience cramping pain in the left calf after walking, what do you feel that we might offer this individual in order to more nearly restore him to normal?

DR. SMYTHE: In view of his fleeting improvement with paravertebral blocks, perhaps a left lumbar sympathectomy would give him some measure of lasting relief.

DR. WILSON: I certainly agree that sympathectomy should be seriously considered if this patient has intermittent claudication.

Follow-Up Observations

DR. WILSON: Dr. Bushart, the patient we considered at our previous conference two weeks ago has, I believe, since undergone lumbar sympathectomy. Since you are the resident who did this sympathectomy, I would like for you to state exactly what significant ganglia were removed and to summarize the changes in physical findings which occurred in the extremity, and also in the patient's ability to walk following the operation you performed.

DR. BUSHART: Ambulation was started on this patient and it was found that he was unable to walk the length of the ward without severe pain. A left lumbar sympathectomy was done following this discovery, removing L-1, L-2 and L-3 ganglia. Following the lumbar sympathectomy an excellent response was noticed in the patient. Blood pressure in the popliteals became equal. As soon as the patient became ambulatory following surgery, it was found that he could walk the length of the ward four times without pain whereas previously he was unable to walk the length of the ward one time. Local temperature of the affected extremity was increased over the opposite one. All pulses were improved with the exception of the left dorsalis pedis.

DR. WILSON: In summary then it seems that we all feel at this time that this patient probably had an embolus to the femoral artery even though the case is not a typical one. The embolus had probably been present for too long a period of time to make a successful embolectomy seem likely however. Because of the spectacular improvement which resulted from the blocks performed by Dr. Benton we did not seriously consider embolectomy. Dr. Bushart has demonstrated how lumbar sympathectomy may improve the circulation in an extremity in which a deficit exists. This improvement probably resulted from a dilation of some vessels which were normal and also by relieving spasm in certain other vessels.

DR. WILSON: The next case to be considered on rounds is an interesting one which presents the problem of a patient with an obstructive lesion of the sigmoid colon, and is also interesting because the diagnosis is one which at first was not considered to be the most likely one.

Dr. Bushart, will you present the case to the group?

DR. BUSHART: This 57-year-old colored male presented himself to the Out-Patient Department with a history of chronic illness dating back 18 months prior, with a chief complaint of left lower quadrant pain associated with constipation and weight loss.

The onset was insidious in character with only slight left lower quadrant pain and slight constipation. Approximately a year ago, the severity of these symptoms increased and he started losing weight steadily. Weight loss was continued and his debility was so marked that he was forced to discontinue work 3 months ago. On admission to the Clinic, it was found that he had lost a total of 41 pounds. There was no history of rectal bleeding. The patient was admitted to the hospital and examination revealed a well preserved colored male with evidence of weight loss and a questionable mass in the left lower quadrant.

Examination of the colon by barium enema showed an obstructing lesion of the sigmoid colon in the mid portion. Sigmoidoscopic examination was done, passing the sigmoidoscope 8 inches without evidence of pathology. Hematological and X-ray findings were within normal range, and the decision was made to do an exploratory laparotomy. Our pre-operative diagnosis was carcinoma of the sigmoid colon. We also entertained a possibility of diverticulitis of the sigmoid colon.

DR. WILSON: Dr. Bushart, the resident, has given us a detailed history, but I am going to ask Dr. Benton, the assistant resident on this ward, to summarize briefly the important features in the history and physical examination.

DR. B. F. BENTON: The points that stand out in this man's history and physical examination are weight loss, left lower quadrant pain, a long history of constipation, questionable left lower quadrant mass and X-ray evidence of an obstructive lesion in the sigmoid colon.

DR. WILSON: Dr. Bushart, was there any history of chills and fever?

DR. BUSHART: Yes, on several occasions this patient did have chills and fever. These episodes occurred when he had the most acute exacerbation of his symptoms.

DR. WILSON: Before we ask the resident to describe the findings at operation, are there any other questions from the group regarding the pre-operative findings shown by this patient?

DR. RUSSELL PATTERSON: You mentioned, Dr. Bushart, that this patient had an obstructive lesion. Does this mean that he had a complete obstruction of the colon?

DR. WILSON: Dr. Bushart, will you clarify this point for Dr. Patterson?

DR. BUSHART: No, this patient did not have a complete obstruction of the colon. He was passing gas and having bowel movements.

DR. PATTERSON: Did the barium enema give any help in the differential diagnosis of the type of lesion present?

DR. BUSHART: I will read the X-ray report for you.

> "Examination of the colon by barium enema reveals obstruction to the flow of barium in the mid sigmoid region. There is probably a constricting lesion at this point, but since none of the barium could be expressed through or beyond the site of obstruction and also since there is no evidence of gaseous or fluid distention of the colon proximal to this site, a recheck examination is indicated prior to final diagnosis."

A second examination gave no additional information.

DR. WILSON: Are there any further questions from the group before we have the operative findings discussed? Dr. Bushart, give us the findings at operation.

DR. BUSHART: At surgery, a constricting lesion approximately 5 to 6 inches from the peritoneal reflection was found. This lesion was adherent to the bladder, and the bladder wall was thickened and seemed to be involved in the process. A loop of small bowel approximately 3 feet from the ileocecal junction was also adherent to this mass. Small, firm nodes were found in the mesentery, but no other nodes were found. The nature of the lesion was questionable at the time. I requested consultation in the operating room with Dr. Hardy, the attending surgeon. It was his opinion that we should biopsy one of the lymph nodes, which was done. A frozen section revealed inflammatory reaction in the node with no evidence of carcinoma. Dr. Hardy felt that we should resect the lesion and do a primary anastomosis at the time. It was his opinion that the lesion was inflammatory.

DR. WILSON: Dr. Hardy, will you continue the discussion?

DR. HARDY: With the facts which Dr. Bushart has just related in mind, we talked the situation over. Since he had ascertained that there was no palpable metastasis in the liver in the face of such apparent massive involvement of the sigmoid colon and bladder, it seemed less likely that the process was a malignant one. We decided that if it were malignant one should consider resecting the wall of the bladder. However, since, as Dr. Eldridge Eliason would say—"one does not convict a man without a trial," we decided to resect the loop of sigmoid, after first having dissected it from the wall of the bladder and the loop of small bowel. The pathologist had returned and he had not been able to find carcinoma in the lymph node. Thus, we thought that in the absence of proof of carcinoma, or even in the presence of proof of carcinoma, resection of the sigmoid was the procedure of choice in this case.

DR. WILSON: I believe all of us would agree that resection of the colon was indicated in this case, and I believe further pathologic examination showed the lesion in the colon to be inflammatory, due mainly to diverticulitis.

Dr. Poole, how much reliance, as a rule, do you think one can place upon the examination of an enlarged lymph node in such a case to establish whether or not we are dealing with a malignant lesion or with one of inflammatory origin?

DR. R. M. POOLE: I feel that this is an advisable procedure. The information obtained is certainly worth while, but it would depend on the examination of more than one lymph node, and I think it should be correlated with the gross appearance of the lesion. We must remember that this same situation might confront some of us at a time when a pathologist is not available to make an immediate microscopic study of the node. In such a case, I think that the surgeon's ability to make his own decision from the gross appearance of the lesion would supersede the examination of the lymph node.

DR. WILSON: Certainly there are times when it is impossible to differentiate grossly whether a lesion in the sigmoid is inflammatory or neoplastic in origin, although as a general rule we do not have great difficulty in making a differential diagnosis.

Dr. Gillespie, do you have further comment on this particular case?

DR. C. E. GILLESPIE: There are two questions that have arisen in my mind during the course of this discussion. The first of these is, what influence the pathologic report on the biopsy would have had on the operative procedure. It seems to me that we would have done a resection whether or not the lesion had been malignant or inflammatory. I don't believe that we could have made a definite diagnosis until the mass itself was removed. The other question in my mind was relative to the condition of the bowel wall adjacent to the mass. Was there very marked inflammatory reaction in the bowel wall, or was it normal? In the presence of a very marked inflammatory reaction, one might be inclined to do a complementary colostomy after the anastomosis. With a normal bowel wall this would not be necessary.

DR. WILSON: The most important question at this time, I suppose, is what is the patient's condition at the present?

DR. BUSHART: This is the eleventh post-operative day, and his post-operative course has been uneventful. In answer to Dr. Gillespie's question concerning the condition of the bowel above and below the lesion, this was found to be grossly normal and presented no difficulty in our doing a satisfactory anastomosis.

DR. WILSON: It will be interesting to follow the future course of this patient. It is fortunate for the patient that no malignancy was present. It must be remembered, however, that this patient may have difficulty later with other diverticulae, since these are usually multiple. The chances of a recurrence of this difficulty, though, is unlikely.

The President's Page

THEREFORE BE IT RESOLVED . . . .

Dr. Kelly

By tradition, this is the season when men become resolute and resolve to do certain things they failed to do the year before. And next year many of the resolutions made now may have been broken. But it doesn't hurt to try, to set up some goals, to fashion a better design for living.

Perhaps it would be well for the medical profession to take a moral inventory of the past and silently make a few New Year's resolutions. These resolutions should be made by us as individual physicians, as citizens, and as medical society members. We have responsibilities in all three capacities.

As physicians, we can re-read The Hippocratic Oath and again swear allegiance to its high principles. It is not easy to live up to this Credo of the medical profession. But the man who does will never need a sedative at night to blunt a pricking conscience.

One worth-while resolve would be for us to promise ourselves that we shall not criticize our fellows, particularly to patients. Nothing so quickly and completely destroys the layman's faith in the profession as a whole. If we have justifiable criticisms, they should be translated into action to discipline or eliminate the man who violates the tenets of his calling.

We should resolve to discuss more freely with our patients the charges made for services, the nature of our services, and listen a little longer to the patient's worries. And the discussion of fees should be in advance of the first treatment, thus avoiding that later misunderstanding which so often arises in dealing with health insurance payments.

In this crucial year in the nation's life, *we must* be more active as citizens, or by default we will lose some of the freedoms which compose our heritage as Americans. Therefore, Be It Resolved that we shall emerge a bit further from our scientific shells and participate in public affairs, vote in every election, large or small, and speak out our convictions on affairs vital to the future in which our children will live.

How can we resolve as members of organized medicine? We can follow the advice of Sir William Osler, immortal physician, and regularly attend, participate in, and support the meetings of our various societies and associations. How can we expect the public to recognize our societies and their contributions to medical care if we are indifferent or apathetic about their activities and programs?

We can resolve to pay more attention to the needs of the younger men just entering organized medicine. The Southern Medical Association was organized to give the young physician a chance, a sounding board for his medical essays, an outlet for fraternizing. We could well take a tip from the founding fathers of this honored Association, one of whom is Dr. Jere L. Crook of Jackson.

If we follow these resolutions, 1952 will indeed be a NEW year. Here is a challenge stated by Dr. Walter Rowe Courtenay, nationally known Presbyterian minister of Nashville:

"A year is new only when we make it so! If we drag ourselves into it like wounded men who have no strength to walk, there will be nothing new about it! If we enter it in despair and defeat, telling our souls we are victims of fate, it will receive us in a like mood! But if we come to it saying to ourselves, to God, and to life, 'I am determined to enter it and live as a child of God who wants a better chance to be a better, happier, more useful companionable person,' you will hear music from the clouds and find light in your darkness."

Ernest G. Kelly

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JANUARY, 1952

EDITORIAL

POTASSIUM

In recent years more and more consideration is given to this cation in clinical medicine. Many papers are being devoted to the study of the effects of potassium deficiency in disease and the management of its lack.

It has been a long established physiological principle that the proper balance between the K, Na, Ca and Mg ions is essential for normal neuromuscular irritability and excitability. Just as *sodium* is the main cation in the fluids *outside* the body cells, so *potassium* is the chief cation in the fluid *inside* most cells and especially in those of the muscles. If much sodium chloride is lost from the body, as in disturbances of acid-base balance, potassium may move from the cells to the extracellular fluid to replace sodium and in so doing is rapidly excreted through the kidneys. The loss of this cation from cells is serious and may be fatal since no other cation can replace it in the cell. Potassium acts in a parasympathetic stimulation manner in muscular activity, being inhibited by calcium. Potassium and calcium are both essential in the physiology of cells in terms of permeability of cell membranes and thus are necessary for most *vital* processes.

The average American diet provides more than enough of potassium, as it does of sodium and chloride, to keep the normal person in balance. The largest quantities are needed during times of rapid growth. Most of the excess potassium is excreted by the kidneys. The fact that potassium is related to intracellular fluid, being combined with hemoglobin and other cellular proteins, as contrasted to sodium is shown by the fact that in normal blood serum sodium is present in amounts of about 330 mg. percent, potassium in about 20 mg. percent whereas, in red cells there is practically no sodium but the potassium content is about 420 m. percent.

Potassium may move in and out of cells when there is sodium loss as was indicated above. It moves into cells with the growth of protoplasm and out with its disintegration. It moves out into the plasma with increased muscular activity, increased metabolism, and from muscle to liver with lactic acid and in the reverse direction under contrary circumstances.

Deficiency of potassium has now been recognized clinically in circumstances of fluid loss as in prolonged vomiting or diarrhea, intestinal fistulae and gastrointestinal decompression in the presence of inadequate intake. In the treatment of diabetic acidosis potassium deficiency may develop through the expansion of extracellular fluid in the correction of dehydration by potassium-free fluid. Furthermore, this cation leaves the cell to enter the serum and is deposited in the liver with glycogen. In alkalosis due to pyloric obstruction sodium may displace potassium in the cell the latter then being excreted from the serum by the kidney. Under the administration of ACTH and cortisone, as well as other adrenal hormones, for a period of days potassium loss occurs, the patient going into a state of negative potassium balance.

Hypopotassium reflects itself in electrocardiographic changes.* In 80 percent of

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*Bellet, S., et al.: Electrocardiographic Patterns in Hypopotassemia: Observations on 79 Patients, Am. J. M. Sc., 219:542, 1950.

cases these changes consist of depression of the ST segment and the inversion of T waves and can be reversed by the giving of potassium. There are no other clinical signs of deficiency. Hypopotassemia should be corrected by giving 2 to 3 Gm. of potassium chloride daily if fluid loss or gastrointestinal decompression continues for more than two or three days. It may be added to a liter of intravenous fluids.

Potassium intoxication occurs in the anuria of shock and lower nephron syndrome. Cardiac arrest is a sign of hyperpotassemia. Lavage of the stomach is the only management in such instances.

No doubt much more will be learned regarding the role of potassium in clinical medicine in the next few years.

R. H. K.

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HOSPITALIZATION FOR TENNESSEE INDIGENTS

Sometime in the early part of 1951 the chairman of your Public Service Committee and other representatives of the Tennessee State Medical Association waited upon Governor Browning with a request that the state legislature give consideration to providing means for the hospitalization of indigent patients. It was rather late in the session and advisers felt it not feasible to accomplish anything which might be sound on such relatively short notice. The legislature did, however, appropriate a sum of money to empower a commission to study the problem for presentation to the 1953 General Assembly. The commission appointed consists of members of the Tennessee State Medical Association under the chairmanship of Dr. R. H. Hutcheson, Commissioner of Health.

The newspapers have announced that the commission met recently and appointed Dr. R. C. Berson as executive director of the study.

It is the hope that this study will provide the data upon which the General Assembly will act to provide much needed aid in the care of the indigent. In a previous editorial* it was pointed out that there has been a long experience with profession-backed methods of state supported hospitalization for the indigent. A number of such plans have been initiated since the first one in 1915.

The need for the use of diagnostic aids and or hospitalization is acute. Most of this service can be provided in communities close to the patient's home. The major advantage of state supported hospitalization of the medically indigent is that waste will be the least where the taxpayer knows the recipient. Waste increases directly with the distance between the site of disbursement (Washington) and the recipient (rural area). Indigency can always be certified more honestly in a home community with the knowledge available to the county judge and family doctor. In the home area both judge and doctor as taxpayers will have the interest of the public in mind, and yet it is a rare physician who is not so human but that he will use public money if it is needed for medical care. Under such a scheme *only the physician should be enabled to recommend hospitalization.* Last year it was, and again will be emphasized to the legislature that doctors' services will be *free.*

The profession can show constructive statesmanship by backing legislation of this kind in order to implement the third item of the TENNESSEE TEN. What better means is there to still the demand for governmental medicine, call it by whatever name you wish. Your editor hopes every physician in the state will seize any opportunity which presents itself to inform individual legislators of the importance of this proposal which will appear before the next legislative session.

R. H. K.

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A HOME FOR THE TENNESSEE STATE MEDICAL ASSOCIATION

By this time each member of the Tennessee State Medical Association has received a letter from Past-President Dr. Ralph Monger. He has felt very strongly that the State Association should have a permanent home in Nashville. Acting upon this belief, Dr. Monger obtained permission from the

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*Editorial, "Medical Care for the Indigent," J. Tennessee M. A., 43:472 (Dec)., 1950.

Trustees to undertake a campaign to raise money for such a building.

From his experience in assisting in the raising of money for the purchase of a home for the Knoxville Academy of Medicine, Dr. Monger believes that a state-wide appeal will be successful in getting together a goodly sum of money for a home for the State Association. (The Knoxville project was completed at a time when its membership was at a low number during the war, no man in service being asked to contribute.)

A building of its own makes an organization a much more tangible thing to the members who take the opportunity to cross its threshold. It offers a repository of records and other memorabilia. Finally, it is more economical than the renting of office space year after year. The overhead on a building for the Association could be carried by rentals of offices to allied professional groups.

Your Editor is sure that all of us wish Dr. Monger the best of luck in the big chore he has taken on singlehandedly. This takes courage and it is hoped that the membership will back him with what he asks for,—*money.*

R. H. K.

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Honor Roll

Building Fund Contributors

The following members have sent their checks for the Building Fund. Contributions now total more than $1,000 (Dec. 31).

Kyle C. Copenhaver, M.D., Knoxville
William Milton Adams, M.D., Memphis
J. L. Bryan, M.D., Nashville
Nathaniel J. Chew, Bristol
H. B. Everett, M.D., Memphis
Frank A. Faulkner, M.D., Knoxville
John E. Kesterson, M.D., Knoxville
Henry T. Kirby-Smith, M.D., Sewanee
Rudolph A. Light, M.D., Nashville
H. L. Monroe, M.D., Erwin
Herschel Penn, M.D., Knoxville
Jarrell Penn, M.D., Knoxville
Frank W. Stevens, M.D., Nashville
Hugh Swingle, M.D., Johnson City
Robert T. Terry, M.D., Nashville

WHAT'S NEW IN MEDICINE

Clinical Effects of Cortisone Administered Orally to Patients with Rheumatoid Arthritis, Ward, L. E., Slocumb, C. H., Polley, H. F., and Lowman, E. W., Proc. Staff Meet., Mayo Clinic, 26:361, 1951.

Oral use of cortisone was begun as a long-term experimental treatment of rheumatoid arthritis. By this means 99 of 100 cases of rheumatoid arthritis obtained relief. Only slightly more cortisone was needed orally than parenterally to obtain relief. Effects were noted to be more prompt by oral administration than by injection. The daily dose needed to be given in 3 or 4 parts during the day because of the short effect of orally given cortisone. The side effects were the same as with injected cortisone and occurred in 54 cases, consisting in the main of mental stimulation, rounding of the face, alterations of electrolytes, etc. Initial daily suppressive doses varied from 37.5 to 200 mg. Maintained doses ranged from 25 to 100 mg.

Since these patients represent a long-term investigative study, in only 11 patients was cortisone discontinued. Relapses of the arthritis occurred in 10-60 hours after withdrawal of the hormone in 9. Two maintained remissions now of 2 and 10 months respectively.

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Development of Treponemal Immobilizing Antibodies in Mice Following Injection of Killed Treponema Pallidum, McLeod, Charlotte, and Magnuson, H. J., J. Ven. Dis. Inform., 32:274, 1951.

The only specific laboratory method for testing whether a person has ever suffered a syphilitic infection is the demonstration of treponemal immobilizing antibodies in his serum. In an extension of this study an attempt to immunize rabbits was unsuccessful. The authors have found that white mice, though showing only asymptomatic infection, following inoculation with T. pallidum, will develop immobilizing antibodies. Inocula were derived from testicles of rabbits inoculated with T. pallidum of the Nichols strain. Normal mouse serum contains no immobilizing antibodies. The inoculation with 8 million treponemas did not stimulate antibody formation in 3 months. However, 12 million living, mapharsen-killed or heat-killed treponemas stimulated such antibodies in less than 2 weeks.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Consolidated Medical Assembly of West Tennessee

The Consolidated Medical Assembly of West Tennessee held its regular monthly dinner session at the New Southern Hotel on Tuesday, December 4. The scientific program consisted of a paper on "Lymphatics of the Stomach" by Dr. John G. Riddle of Jackson. The following officers were elected: President, Dr. Julian K. Welch, Jr., of Brownsville, a Vice-President of the Tennessee State Medical Association; First Vice-President, Dr. John Powers of Jackson; Second Vice-President, Dr. John Jackson of Dyer; and Third Vice-President, Dr. John T. Keeton of Clifton. Dr. S. M. Herron of Jackson was re-elected Secretary-Treasurer, and Dr. Leland Johnston of Jackson, Assistant Secretary-Treasurer. Forty-five members attended the meeting.

*

Knoxville Academy of Medicine

The Academy held its regular meeting at 8:00 P.M. at the Academy Building on December 4. Dr. John Dougherty of Knoxville discussed "Problems Encountered in Genito-Urinary Tuberculosis."

The Knoxville Academy held its regular bimonthly meeting on December 18 at the Academy Building. The speaker was Dr. W. W. Wilkerson, Jr., of Nashville. Dr. Wilkerson related details of the operation of the Hearing and Speech Center in Nashville. Following Dr. Wilkerson's address the Knoxville Academy endorsed the establishment of a similar center for the correction of speech and hearing defects for East Tennessee children. However, no concrete plans for the actual operation of this center were undertaken at this meeting.

*

Robertson County Medical Society

The Society held its regular meeting on December 11 at the Springfield Hospital with a large majority of the members present. Officers elected for the year 1952 were: John S. Hawkins, President; Willie P. Stone, Vice-President; and Dr. John S. Freeman was re-elected Secretary-Treasurer. The scientific program was an illustrated lecture on "Clinical Jaundice" by Dr. Harrison Shull of Nashville.

*

Sullivan-Johnson County Medical Society

The Society elected its 1952 officers at its regular December meeting. Dr. Hyatt Brown of Kingsport was elected President; Dr. George McCall of Bristol, Vice-President; and Dr. Charles Harkrader, Jr., of Bristol, Secretary-Treasurer.

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Hamblen County Medical Society

The Society, composed of physicians in Hamblen and Jefferson Counties, held its annual election at its December meeting. Dr. Sam Sullenberger of Dandridge was chosen President. Dr. Sullenberger succeeds Dr. F. F. Painter, who was presented a Fifty-Year Service Pin from the Tennessee State Medical Association in recognition of his fifty years of service in Hamblen County.

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Memphis and Shelby County Society

Officers for 1952 were installed at the Society's regular meeting on December 18. Dr. Henry Gotten is the new President; Dr. D. H. James, Vice-President; Dr. Battle Malone II, Treasurer; and Dr. Malcolm Aste, Secretary. Dr. Gotten succeeds Dr. William Stinson. The President-Elect of the Society is Dr. E. G. Campbell, Chief of Staff at St. Joseph's Hospital. Dr. Campbell holds membership in a large number of medical organizations.

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Roane County Society

Dr. Barton McSwain of Nashville addressed the Society at its regular November meeting on the subject of "Surgical Diseases of the Spleen." The meeting was held in the Doctors' Lounge at the Oak Ridge Hospital. Invitations had been extended to all physicians in the area.

The Medical Auxiliary met the same night at the home of Mesdames E. M. and P. M. Dings. 1952 officers were scheduled for election at the meeting.

*

Chattanooga-Hamilton County Medical Society

The Society held its regular election on December 13. Dr. Fred E. Marsh was elected President, succeeding Dr. James L. Hamilton. Dr. William G. Stephenson was named President-Elect and Dr. Robert G. Demos was re-elected Secretary-Treasurer.

★

Monroe, McMinn and Loudon County Societies

A joint dinner meeting of the three Societies was held recently at the home of Dr. and Mrs. R. C. Kimbrough of Madisonville. The scientific program was given by Dr. Frank Rogers and Dr. A. W. Diddle of Knoxville who spoke on "Diagnosis and Treatment of Cancer of the Cervix." The Knoxville physicians illustrated their talks with lantern slides.

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Bradley County Medical Society

Members of the Society were entertained at a dinner party recently at the home of Dr. Dwight N. Arnold. Dr. Paul Golley, Chattanooga and Hamilton County Health Officer, was the guest speaker.

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Tri-County Medical Society

The Tri-County Society held its annual election meeting at the Johnson City Country Club last month. Dr. J. R. Bowman of Johnson City was elected President. Dr. Earl Peterson of Erwin was elected President-Elect; Dr. H. P. Williams of Elizabethton, Vice-President; Dr. John Wilson, Johnson City, Secretary; and Dr. T. P. McKee, Johnson City, Treasurer. Dr. Lee K. Gibson of Johnson City and Dr. H. L. Monroe of Erwin were elected Delegates to the Tennessee State Medical Association. Dr. E. L. Caudill, Jr., of Elizabethton is the outgoing President.

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Nashville Academy of Medicine

The annual election of officers was held on December 11. Dr. Willard O. Tirrill is President-Elect for 1952. Dr. William Kennon, Jr., was re-elected as Secretary-Treasurer. Doctors W. O. Vaughn and R. H. Kampmeier were elected to replace Doctors W. W. Wilkerson, Jr., and C. C. Trabue, who have completed three years of service on the Board of Directors.

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Putnam County Medical Society

Officers elected for 1952 are: Dr. J. T. DeBerry, President; Dr. K. L. Haile, Vice-President; Dr. T. Shipley, Secretary-Treasurer; Dr. W. A. Hensley as delegate and Dr. W. A. Howard as alternate.

NATIONAL NEWS

The U. S. Budget Bureau believes the time has come to *limit expansion* of basic federal health programs to those contributing directly to national defense; it feels a "*complete and systematic*" review of all federal grants for promoting health is now in order, with a view toward economy and efficiency and elimination of possible federal interference in state operations.

Elmer Staats, assistant director of the Bureau, who outlined the government position to State and Territorial Health Officers, placed current federal spending on all health and hospital programs, including the military and for veterans, at $1.75 billion annually. This is greater than that spent by all state and local governments. He listed these facts to show extent of federal health activities: (1) more than 25 million persons, including 18.5 million veterans, 3.5 million officers and enlisted men and 2 million federal civilian employees eligible for medical services and hospital care, (2) over 500 hospitals with 220,000-bed capacity under Federal operation or nearly 20 percent of all hospital beds in the U. S., (3) 10 grant programs costing $233 million concerned directly with health.

On the question of re-examining grant programs, Mr. Staats said they might be more effective and economical if existing piecemeal programs were consolidated into broader programs and if grants could be more definitely related to fiscal resources of the states as well as to the states' needs for services. Further, he believes federal administrators of programs should be given enough authority to make sure that national interests are protected "*but not so much authority that coercion is substituted for cooperation.*

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

Four new members have been added to the staff of the Division of Anatomy. They are R. L. Bacon, Ph.D., S. A. Cohn, Ph.D., L. S. Cunningham, M.D., and J. S. Davis, Ph.D.

* * *

Vanderbilt University School of Medicine

In honor of the late Dr. G. C. Savage, outstanding ophthalmologist of Nashville, a lectureship sponsored by the Senior Class has been established. The first lecture was given on November 16 by Dr. Harold F. Falls, professor of ophthalmology of the University of Michigan, Ann Arbor. His subject was "Hereditary Syndrome of the Head and Neck."

The Vanderbilt Medical Society met on Friday, January 4, 1952. The program was devoted to a review of the life and works of Dr. Edgar Jones, with the following program:

Edgar Jones: Biographical Review by Dr. Hugh J. Morgan.

Edgar Jones: Bibliographical Review by Dr. R. H. Kampmeier.

"A Study of Relapse of Patients with Pernicious Anemia," by Dr. Edgar Jones, Dr. Margaret P. Martin and Dr. William J. Darby.

Case Report: Minimal Dose of Vitamin B_{12} in Treatment of Pernicious Anemia, by Dr. Edgar Jones, Dr. Sam Clark, Jr., and Dr. Harold Sandstead.

* * *

Newell Hospital

The Chattanooga papers have carried the story of the modernization and expansion of the Newell Hospital by an expenditure of $150,000. A new fire-proof, air-conditioned wing will be built. This will house emergency and operating rooms.

* * *

Dr. Berson Named Executive Director of Hospital Care Commission

Dr. Robert C. Berson, a native of Brownsville, Tennessee, and a graduate of Vanderbilt University School of Medicine in 1937, was named Executive Director of the State Hospital Indigency Care Commission at a recent meeting of the Commission in Nashville. After training as a house officer at Vanderbilt University Hospital, Dr. Berson served with the Vanderbilt University Unit from 1942-46. Subsequently he was assistant dean at the University of Illinois Medical School. In the last two years he has been engaged in a nation-wide survey of medical education under the auspices of the AMA and Association of American Medical Colleges.

The Commission, of which Dr. R. H. Hutcheson is Chairman, is a fact-finding group created by the 1951 General Assembly to study the practicability of establishing a program of hospital care for the medically indigent in Tennessee.

The Commission is scheduled to report its findings and to make recommendations to the governor by October, 1952. If the plan for the hospital care of Tennessee indigents is approved by the governor, the report and recommendations will be submitted to the 1953 General Assembly for action.

Physicians in Tennessee, through their Public Service Committee of the Tennessee State Medical Association, have pledged their service without charge to all patients who would be eligible for admittance to hospitals under the proposed program.

* * *

Tennessee Department of Public Health* Report on Tumor Clinics

The third year of participation of tumor clinics in Tennessee in the study of cancer patients conducted by the Tennessee Department of Public Health has been completed. Five clinics partici-

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*This is an abstract of the report. A number of tables are not included. No doubt complete reports are available from the Department of Public Health.

TABLE I

Number and Percentage of Cases of Malignant Neoplasms, by Color and Sex, Tumor Clinics, Tennessee, 1947, 1948, and 1949*

	Total		*White Male*		*White Female*		*Colored Male*		*Colored Female*	
Year	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
1947	497	100.1	129	26.0	188	37.8	44	8.9	136	27.4
1948	749	100.0	244	32.6	225	30.0	74	9.9	206	27.5
1949	1230	99.9	372	30.2	485	39.4	83	6.7	290	23.6

*Five clinics are included for 1947 and 1948. Six clinics are included for 1949.

pated for the first 2 years and six clinics are included in the year 1949. The annual reports of the six clinics have been combined in this summary report which gives data regarding new admissions during the third year of study.

Only cases of malignant neoplasms are included in this report for 1949. The fact that six clinics are in the study in 1949 while five clinics were included previously should be remembered throughout this report. Although the new clinic is responsible for 208 of the total number of admissions there was a substantial increase in the five clinics included in the 1947 and 1948 reports.

As the number of patients admitted to the participating clinics has increased, an increase in the number of admissions was noted for each of the groups, white males, white females, colored males and colored females (Table I). The percentage of females has exceeded that of males for every year of the study.

Data regarding malignant neoplasms according to site for 1947, 1948, and 1949 are given in Table II. An increase in admissions has occurred each year for cancers of the groups of sites included. For some of the groups the increases were great; for example only 9 of the newly diagnosed cases in 1947 were of the respiratory system while 54 of the cases in 1949 were diagnosed as being in that group.

The numbers and percentages of cases of malignant neoplasms according to site and extent are given in Table III. When the extents of the lesions are studied it is found that of the malignant neoplasms 277 (22.5%) were localized, 383 (31.1%) had extension to the nodes and/or regional metastasis, and 209 (17.0%) were considered as having remote metastasis at the time of admission. More than one-fourth (29.3%) were unclassified by extent. During the previous year the extent was not given for 26.2% of the cases. Thus, it is evident that this information is not being completed on all records. The neoplasms with unclassified extent varied from none in one clinic to 86.1% of the admissions in another clinic.

There were wide variations in the extents of the lesions according to site. For example, only 10.9% of the cases of malignant neoplasms of digestive organs were localized while 43.5% of the skin lesions and 24.1% of those of respiratory system were localized in extent. Nearly three-fourths of the cancers of female breast had either regional involvement or remote metastasis at the time of admission. The extent was unclassified for nearly one-half (42.3%) of the skin neoplasms. The percentages for the unclassified lesions varied from none for lymphosarcoma to 50.0% for the brain, etc. If the extents were given for all of the lesions,

TABLE II

Number and Percentage of Cases of Malignant Neoplasms According to Site, Tumor Clinics, Tennessee, 1947, 1948, and 1949*

	1947		*1948*		*1949*	
Site	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Total	497	100.0	749	99.9	1230	100.1
Buccal cavity	31	6.2	72	9.6	102	8.3
Digestive organs	30	6.0	77	10.3	92	7.5
Respiratory system	9	1.8	16	2.1	54	4.4
Female genital organs	135	27.2	157	21.0	336	27.3
Female breast	70	14.1	90	12.0	143	11.6
Male genital organs	19	3.8	38	5.1	44	3.6
Urinary system	13	2.6	13	1.7	23	1.9
Skin	136	27.4	201	26.8	317	25.8
Others	54	10.9	85	11.3	119	9.7

Five clinics are included for 1947 and 1948. Six clinics are included for 1949.

TABLE III

Number and Percentage of Cases of Malignant Neoplasms According to Site, by Extent, Six Tumor Clinics, Tennessee, 1949

Site	*Total*		*Localized*		*Regional Involvement*		*Remote Metastasis*		*Not Classified*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Total	1230	99.9	277	22.5	383	31.1	209	17.0	361	29.3
Buccal cavity	102	100.0	18	17.6	34	33.3	17	16.7	33	32.4
Digestive organs	92	100.0	10	10.9	31	33.7	28	30.4	23	25.0
Respiratory system	54	100.0	13	24.1	12	22.2	16	29.6	13	24.1
Female genital organs	336	100.0	58	17.3	125	37.2	71	21.1	82	24.4
Female breast	143	100.0	16	11.2	83	58.0	20	14.0	24	16.8
Male genital organs	44	99.9	3	6.8	17	38.6	14	31.8	10	22.7
Urinary system	23	100.0	4	17.4	8	34.8	7	30.4	4	17.4
Skin	317	100.0	138	43.5	38	12.0	7	2.2	134	42.3
Brain and other parts of nervous system	8	100.0	1	12.5	2	25.0	1	12.5	4	50.0
Bone	10	100.0	1	10.0	4	40.0	2	20.0	3	30.0
Lymphosarcoma	9	100.0	2	22.2	2	22.2	5	55.6	—	—
Hodgkin's disease	9	99.9	—	—	2	22.2	3	33.3	4	44.4
Leukemia	17	100.1	1	5.9	2	11.8	7	41.2	7	41.2
Others	66	100.0	12	18.2	23	34.8	11	16.7	20	30.3

it is probable that the distribution by extent would be quite different from that shown in Table III.

Information regarding the interval from onset of symptoms to date of admission according to the extent of the lesion was analyzed for the 1949 admissions to the six clinics. For 342 (27.8%) of the cases the date of onset of symptoms was given as being *less than six months* prior to admission. One hundred eighty-three others stated the onset to have been between six months and one year prior to admission. Thus, 525 or 42.7%, were aware of symptoms *less than one year* before the first visit to the tumor clinic was made. Four hundred seventy-seven (38.8%) were aware of symptoms *one year or more* before the first visit.*

Of the 342 who had symptoms for less than six months only 72 (21.1%) had localized lesions, 134 (39.2%) had extension to the nodes and/or regional metastasis and 72 had remote metastasis. Slightly more than one-third (36.2%) of those whose onsets were stated as being five or more years prior to admission were localized lesions while only 6.7% had remote metastasis. These data suggest that the

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*The date of onset was unknown for 228 or 18.5% of the cases.

TABLE IV

Number and Percentage of Cases of Malignant Neoplasms According to Interval from Onset of Symptoms to Date of Admission, Six Tumor Clinics, Tennessee, 1947, 1948, and 1949*

Interval	*1947*		*1948*		*1949*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
Total	497	99.8	749	99.8	1230	99.9
Under 1 month	34	6.8	29	3.9	55	4.5
1-5 months	140	28.2	200	26.7	287	23.3
6-11 months	67	13.5	126	16.8	183	14.9
1 year	72	14.5	111	14.8	186	15.1
2 years	40	8.0	57	7.6	95	7.7
3 years	22	4.4	34	4.5	53	4.3
4 years	12	2.4	19	2.5	38	3.1
5-9 years	37	7.4	55	7.3	54	4.4
10 years and over	35	7.0	34	4.5	51	4.1
Unknown	38	7.6	84	11.2	228	18.5

Five clinics are included for 1947 and 1948. Six clinics are included for 1949.

onsets as stated are questionable. Efforts should be made to secure the time that the symptoms of the present condition appeared.

Although the number of admissions increased in 1949, the percentage of the cases diagnosed within six months after onset of symptoms did not increase (Table IV). The percentage with onset of symptoms unknown has increased each year. In 1949, the number with the interval unknown was large. If this number had been smaller, some of the other percentages might have been changed substantially.

Of the 857 cases of white patients, 59 or 6.9% were of persons under 35 years of age, while 9.9% of the cases of colored patients were in that age group. There were 111 or 13.0% of the cases of white persons and 82 or 22.0% of the colored persons in the age group, 35-44 years. The percentages were much higher in the older age groups for the white persons than for the colored. One hundred fifty-two (17.7%) of the cases of white patients and only 4.3% of the cases of colored patients were of persons 75 years of age or over.

Data regarding treatment received by the patients in the clinics are given by clinic in tables in the report. The data are for treatment received after admission to the clinics and do not include any treatment received prior to admission. When no record of treatment could be found it was assumed that no treatment was given. Thus, it is possible that for clinics where the records were not complete the figures presented here may not represent all the actual treatment given patients.

Variations were noted in the types of treatment given in the clinics. Over one-fourth (28.4%) of the 1230 cases of malignant neoplasms received X-ray only and approximately one-fifth (21.1%) received surgery only. Clinic A used X-ray alone for 51.8% of the patients. Clinic E used surgery alone for over one-third (34.2%) of its admissions and Clinic F used X-ray alone for 33.7% of its patients.

X-ray only was used for 40.4% and surgery only for 32.5% of the cases with skin lesions. Over three-fourths (81.2%) of the cases of skin neoplasms in Clinic A were treated with X-ray alone. Clinics E and F also used X-ray more frequently on skin lesions while Clinics B and D used surgery on a larger percentage of their cases. A slightly larger percentage (24.2%) of the cases with non-skin neoplasms received X-ray only than received surgery only (17.2%). In the report for 1948 the reverse was true with a larger percentage of non-skin neoplasms being treated with surgery only than with X-ray only.

Two hundred forty (26.3%) of the cases recorded as either having received no treatment or it was unknown as to whether treatment was received. They were used in this report as having received no treatment.

PERSONAL NEWS

Dr. T. R. Ray, Shelbyville, Past-President of the Tennessee State Medical Association, was elected Chief of Staff of the new Bedford County Hospital. **Dr. Alfred Farrar** was named Vice-President and **Dr. James N. Burch** was named Secretary at a recent staff meeting.

Dr. John Saffold got a "pain in the neck" in attending the Kentucky-Tennessee game. Dr. Saffold bumped his head in a parking garage and X-rays later revealed that a cervical vertebra was broken.

Dr. Fred Terry of Cookeville was elected President of the Medical Staff of the Cookeville General Hospital at a recent meeting. **Dr. Thurman Shipley** was named Vice-President and **Dr. J. T. DeBerry** Secretary-Treasurer.

Dr. W. L. Rucks, Memphis, has been appointed Chairman of an Advisory Committee to organize a medical staff for the Le Bonheur Children's Hospital. **Dr. Tom Mitchell** is the hospital's chief of staff.

Dr. John Burkhart of Knoxville addressed the Knoxville Jaycettes on the subject of "Heart Diseases" at a recent meeting.

Dr. Foster Hampton, Jr., addressed a recent meeting of the Chattanooga Business Women's Club on "The Social Aspects of Medical Progress." He spoke in the interest of the blood program of the Chattanooga Heart Association.

The International College of Surgeons paid a moving tribute to its recently deceased President, **Dr. Herbert Acuff** of Knoxville. The tribute was paid at a formal memorial service recently held in Chicago by the U. S. Chapter of the College. The ceremony was attended by more than 300 surgeons throughout the United States and represented several foreign countries.

Dr. Jack Adams of Chattanooga addressed the Chattanooga Society of Medical Technologists at a recent meeting. He spoke on the organization of the American Society of Clinical Pathologists.

Dr. Augustus McCravey of Chattanooga, adviser to the Tri-State Chapter of the National Paraplegic Foundation, gave a radio address over WAGC on "Abilities and Disabilities of the Paraplegic." The broadcast was sponsored by the Chattanooga-Hamilton County Health Council.

Dr. M. A. Carnes of Maryville addressed the Maryville Rotary Club recently on "The Value of the Clinical Lecture to Medical Science." Dr. Carnes pointed out that the clinical lecture has been one of the most important aspects of medical education since the date of the first medical lecture in the United States on December 3, 1776.

Dr. James Hughes of Memphis was elected President of the Memphis and Shelby County Pediatric Society at a recent meeting.

Dr. John B. Youmans, Nashville, was elected vice-president of the American Clinical and Climatological Association at its meeting November 5, at Skytop, Pennsylvania. Doctors Albert Weinstein and Harrison Shull also of Nashville were elected to membership.

LOCATION WANTED

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

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Location Wanted

A young physician desires to enter general practice in Tennessee. He is 37, married, has two children. He graduated with honors from UT Medical School in 1945. Completed 13-month internship at John Gaston Hospital, then entered the Public Health Service and received a postgraduate course and clinical training in diseases of the chest. Served as Director of Tuberculosis Control Division of Public Health Department from 1940 to 1950. He is presently employed as full-time physician with a State Public Health Department. He has a Tennessee license and would be available on thirty days' notice.

LW-5

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Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself:

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

★

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

★

Surgical Residents Wanted

The Newell Hospital, Inc., Chattanooga 2, Tennessee, has immediate opening for surgical residents. The hospital is an accredited 50-bed general hospital with a large private clinic practice. The resident salary is $400 per month with maintenance. The Newell Hospital has recently become approved for one-year residency training by the Council on Hospitals of the American Medical Association. Residents can obtain approval from the American Board of Surgery and the American College of Surgeons on a preceptorship basis. The address inquiry to Dr. Edward T. Newell, Jr., c/o The Newell Hospital. The present residency is open until July 1, 1952, at which time three additional appointments will be available.

PW-3

★

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

★

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

★

The following communication has been received by this office:

"This letter is in behalf of our community's need for a good general medical doctor. We have no doctor at all in our area, which comprises a radius of 3 miles, and a growing population.

"We are situated 9 miles N.W. of Atlanta, Ga., in Cobb County, where Lockheed Aircraft is beginning the construction of the world's fastest jet bombers. There is a steadily growing need for a doctor.

"Our offer is office space, rent-free for one year, with other possible offers by our Civic Club. I will be glad to furnish more definite information to anyone interested."

PW-7

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville.

ABSTRACTS OF CURRENT LITERATURE

Rheumatic Fever and Rheumatic Heart Disease: A Twenty Year Report on 1,000 Patients Followed Since Childhood, Bland, E. F., & Jones, T. D., Circulation, 4:836, 1951.

This paper deals with an interim report after 20 years of 1,000 patients followed since childhood. The authors stress three main objectives of their study: (1) to define the course of rheumatic fever, (2) to elucidate the evolution of rheumatic heart disease during its formative years, and (3) to appraise certain features of the disease bearing on prognosis.

The average age of onset for the group was 8 years, and those beyond 20 years were excluded. Almost a third have died in the past two decades, the chief cause of death early in their disease being a greatly enlarged heart or congestive failure. Pericarditis, subcutaneous nodules, and acute arthritis occupied intermediate positions, and in rather sharp contrast, chorea was characteristically associated with a benign form of the disease.

Twenty years of observation on the evolution of rheumatic heart disease provided the authors an excellent opportunity to study certain of the less well known features of this disease during its formative years. Of special interest has been the gradual disappearance of all signs of heart disease in a considerable number and, in a comparable group, the insidious appearance of mitral stenosis after 15-20 years of good health without intervening signs of infection or heart disease.

The signs of so-called pure mitral stenosis ultimately appear in a considerable number. It represents a gradual evolution of the signs of mitral valve injury. The time element is variable in that some acquire a high degree of stenosis in five years, whereas others fail to do so in 50 years. It is important to re-emphasize the fact that the pure form of mitral stenosis by auscultation need not always represent a high degree of actual narrowing of the orifice, and relatively slight degrees accompanied by little or no cardiac enlargement may be well borne for years without serious disability or apparent progression. Therefore, the suggestion recently advanced that early valvulotomy under these circumstances might present the later development of higher degrees of obstruction and thereby protect the lungs seems too drastic, and for the present, the risk of surgery had best be reserved for those in actual need of relief.

In conclusion, the authors emphasize that in the future new and already promising measures for the prevention and arrest of rheumatic fever and rheumatic heart disease may render the data reported obsolete but useful, nevertheless, as the record of a past and pitiful era in the evolution of this devastating disease. (Abstracted for the Middle Tennessee Heart Association by Crawford W. Adams, M.D., Nashville, Tenn.)

★

Clinical Variations of the Diabetic Syndrome in a Tropical Country (Ceylon), DeZoysa, V. P., Arch. Int. Med., 88, 1951.

It is well known that several factors may play a role in modifying diabetes mellitus. The purpose of this paper the authors state is to indicate that in a tropical country such as Ceylon the variations from what is expected of diabetics in countries of the Western Hemisphere temperate climates is due largely to the dietary habits of the people. These were studied by making a diabetes survey of a selected locality in Ceylon and of course the diets of diabetic and non-diabetic persons were studied. A table showed that: (1) a diet composed of a very large proportion of carbohydrate is consumed by the local population; (2) the carbohydrate contributed 60 to 70% of the calories in the case of the Ceylonese, as compared with 43 to 46% in the case of the British people; (3) the percentage of calories derived from fat in the Ceylonese diet is very much smaller than that in the western diet.

It has been shown that a high-carbohydrate, low-fat diet increases the dextrose tolerance and the sensitivity to insulin in the healthy person and in the diabetic. One would, therefore, expect the occurrence of a mild type of the disease among a people who partake of a high-carbohydrate diet and such a condition did prevail in Ceylon.

Diabetes was detected in 111 persons during the survey. Severity was listed as follows:—very mild, 54%; mild, 41%; moderate, 36%; severe, 1.4%.

In the follow-up study of 180 patients it was found that only three had mild ketosis, occurring in all during infective processes (two during the course of pyelitis and one during an attack of influenza).

None of these patients had been in coma in spite of omission of insulin for variable periods, extending in some instances to six weeks or failure to conform to a strict dietary regime.

The authors stress that the rarity of these conditions is due to dietetic differences.

Only 5% of the 180 diabetics showed some degree of peripheral vascular occlusive disease as compared with high incidence obtained in western countries. Although the causative factors of arteriosclerosis are not known there is evidence to suggest that metabolic disturbance resulting in hypercholesterolemia may bring about this condition. It has already been shown that the diet of the Ceylonese people is very low in fat content.

Analysis of weight of patients attending the diabetic clinic and of the 111 diabetics revealed that only 20% were overweight, 68% being underweight. This is in marked contrast with Dr. Joslin and coworkers' statement that 80% of his adult diabetics are overweight at the time they come in for treatment.

It is possible that in the tropics undernutrition among some, and the low intake of fat generally, produce the underweight diabetic, and in the western countries overnutrition is responsible for the high incidence of overweight persons. (Abstracted for the Tennessee Diabetic Association by W. C. Crowder, M.D., Maryville, Tenn.)

*

Treatment of Essential and Malignant Hypertension, Page, I. H., J.A.M.A., 147:1311, 1951.

The ever-present problems in the treatment of essential and malignant hypertension must wait for a more conclusive solution upon a fuller knowledge of etiology. There still remains an unresolved controversy, which we may call the renal theory versus the neurohumoral theory; but the distance between the adherents of each is steadily growing narrower. Meanwhile, because of the interrelationships among the various etiologic factors, the clinician has a difficult time in appraising the hypertensive patient, and clinical judgment continues to be needed for final evaluation.

It is currently the practice to treat hypertension of different causes with the same remedy and this is unlikely to change until something specific evolves from research. A brief but inclusive review of current treatment has recently been published which will be of value to the clinician who must choose between many therapeutic courses open to him. The problems discussed deal with diet, surgery and drugs.

In the matter of diet, there seems to be only one area of general agreement: when hypertensive patients are overweight, the total caloric intake should be reduced. Other than that, the problems of diet are contentious and the merit of any regimen must be ultimately determined by the response of the individual patient. The advantages of the low-salt diets with the use of cationic-exchange resins and their inherent dangers, such as potassium deficiency, are well known in connection with the treatment of other cardiovascular diseases. The rice diet is a relatively low-calory, low-sodium, low-cholesterol and low-nitrogen diet which for some individuals is about the only way of obtaining a practical low-salt diet, although, as in the case of any radical changes in diet, there is the possibility that deficiencies, especially of liver function, may appear over a long period of dietary restriction.

The role of blood cholesterol levels in hypertension is still undetermined. Some evidence suggests that blood cholesterol is responsive only to diets which are virtually free of fat and cholesterol, but this involves drastic dietary restriction with its attendant danger of deficiencies.

The judicious use of surgery in the treatment of hypertension depends on finding some reliable and objective method for the selection of patients. It is generally agreed that Smithwick's lumbodorsal ganglionectomy is the best and most practical type of operation. Complete sympathectomy, total and subtotal adrenalectomy are still experimental.

In the matter of drugs to be used in the treatment of hypertension the clinician can choose from a large and expanding group of remedies. Of the blocking agents, the penta- and hexamethonium salts have been found to be most useful, being relatively easy to handle either given subcutaneously or by mouth. Their therapeutic usefulness may be improved by combining them with other hypotensive agents such as 1-hydraxinophthalazine, nitro-prusside or low-salt diets, but such combinations should be made with caution.

Again we are reminded of the necessity of careful appraisal of the individual problem through observation of the patient's responses. Reports of current clinical research in this field are in striking conflict. More time is needed before an accurate evaluation is possible.

The problem of the treatment of malignant hypertension is intensified by the speed with which the disease runs its course. The time during which it progresses from a reversible to a terminal stage may be a few months, or even weeks. If the disease has not progressed too far, three choices are open for treatment: a drastic low-sodium diet, lumbodorsal sympathectomy (at present limited in malignant hypertension to young patients very early in the disease), and pyrogen therapy. Pyrogen treatment is given six days a week and is usually prolonged for three to four months. A soluble bacterial pyrogen (pyromen-[Baxter]) is given as an infusion in 200 cc. of saline in sufficient amounts to raise the temperature daily to 101 or 102 F. This treatment, while harsh, is considered by some to be preferable to either sympathectomy or radical dietary management.

There is reason to hope that essential and malignant hypertension will some day be curable. Meanwhile, successful management of these diseases is possible "only by the use of every reasonable weapon, diagnostic and therapeutic." (Abstracted for the Middle Tennessee Heart Association by Samuel S. Riven, M.D., Nashville.)

BOOK REVIEW

Spatial Vector Electrocardiography: Clinical Electrocardiographic Interpretation, by Robert P. Grant, M.D., and E. Harvey Estes, Jr., M.D.. Philadelphia: The Blakiston Co., 1951. 149 pages, 41 figures. Price $4.50.

The physicist describes the magnitude and direction of a force as a vector. The electrical position of the heart has always had to be considered in the theoretical aspects of electrocardiography in terms of vectors since the several leads provide a method of measuring vectors,—electrical forces of the heart.

Much of the material in this book was first published privately for the teaching of medical students at Emory University Medical School. Since this type of presentation seemed less confusing than the usual interpretation of electrocardiograms in empirical "patterns" the authors have published the present book.

This small volume is concerned only with the QRS and T deflections. These represent constantly changing forces originating in the heart and their impingement upon the axis of a given lead. By many diagrams the authors present these forces or vectors in attempting to utilize this method of electrocardiographic interpretation in three dimensional terms rather than as memorized "patterns" as in the past. For anyone familiar with electrocardiographic interpretation this will be an interesting reference book.

R. H. K.

* * *

Biological Antagonism: The Theory of Biological Relativity, by Gustav J. Martin, Sc.D. Philadelphia: The Blakiston Co., 1951. 516 pages, 64 figures. $8.50.

Physiologic and biochemical processes in the living organisms are naturally the result of enzymatic reactions. Enzyme activity is relatively specific for any one enzyme. The inhibition of enzymatic activity may occur by displacement through metabolite analogues. Biological antagonists may be either natural or synthetic. Pharmacological agents then are enzyme inhibitors or certainly act in altering enzymatic mechanisms. And understanding of chemotherapeutic agents is based on this principle.

The thesis of this book is that the development of therapeutic agents must be based on an understanding of enzyme activity so that it may be inhibited.

Many examples of enzyme activity are discussed. Some of these are utilized daily by the physician. Thus the inhibition of enzyme systems in the autonomic nervous system is accomplished by drugs like prostigmine, atropine, epeniphrine, ephedrine, caffeine and amphetamine. The antihistaminics are antagonists of histamine on this basis. The sulfonamides inhibit the "growth factor" in bacteria to accomplish their therapeutic effects. The whole complement of vitamins and drugs to be effective in the living tissue involve enzyme and anti-enzyme effects.

It is interesting for the reader to look at the agents in his armamentarium from this viewpoint. However, the understanding of this book requires a fundamental knowledge of biochemistry with which only the relatively recent medical graduate is equipped.

R. H. K.

ANNOUNCEMENTS

Dr. Howard A. Farrar of Manchester has arranged to hold office hours in Tracy City for weekly visits to that community.

Dr. James M. Millen, who has practiced medicine in Lawrenceburg for the last three years, has established his office in Bardstown, Kentucky.

Dr. William B. Holden has established an office for the private practice of medicine in Oak Ridge. Dr. Holden was previously connected with K-25 and the Oak Ridge National Laboratory.

Dr. J. R. Holifield has moved his office from the Smythe's Clinic to a newly remodeled suite of offices in the Markham Building in Tiptonville.

Dr. Robert F. Thomas, Pittman Center, Sevier County, has a new associate, **Dr. Edward Carter Perkins**, a former medical missionary to China.

Dr. Minyard D. Ingram, Jr., has opened his office for the practice of radiology in Nashville.

The Jackson Clinic of Jackson, Tennessee, announces the association of **Dr. John G. Riddler** in the practice of surgery.

Dr. Thomas B. Zerfoss, Jr., has opened an office for the practice of pediatrics in Nashville.

Dr. John J. Killeffer announces the opening of his office in Chattanooga for the practice of orthopedic surgery.

Notice has been received that the office of the **American Board of Obstetrics and Gynecology** has been moved. The new address is: Dr. R. L. Faulkner, Secretary-Treasurer, 2105 Adelbert Road, Cleveland 6, Ohio.

*

Fourth Annual Neuropsychiatric Meeting

This will be held at the Veterans Administration Hospital, North Little Rock, Arkansas, on February 28 and 29, 1952. Guest lecturers include the following: Dr. Leo H. Bartemeier, President, American Psychiatric Association, Detroit; Dr. Daniel Blain, Medical Director, American Psychiatric Association, Washington; Vice-Admiral Joel T. Boone, Chief Medical Director, Veterans Administration; Dr. Paul C. Bucy, Neurosurgeon, Chicago; Dr. D. Ewen Cameron, President-Elect, American Psychiatric Association, Montreal, Canada; Miss Hester B. Crutcher, Director of Social Work, New York State Department of Mental Hygiene, Albany; Dr. E. H. Cushing, Assistant Chief Medical Director, Veterans Administration, Washington; Dr. Edwin F. Gildea, Head of the Department of Neuropsychiatry, Washington University School of Medicine, St. Louis; Dr. O. Hobart Mowrer, Research Professor of Psychology, University of Illinois, Urbana; Dr. Philip Thorek, Surgeon, Chicago; Dr. Harvey J. Tompkins, Chief, Psychiatry and Neurology Division, Veterans Administration, Washington; and Miss Mary Jane Ward, Evanston, Illinois, author of *Snake Pit.* Vice-Admiral Boone will be the speaker at the dinner meeting Thursday evening, February 28. There will be approximately ten clinical demonstrations and thirty technical exhibits having to do with the hospital itself. There will be no charge for registration and attendance of all interested professional personnel will be welcomed. Further information may be obtained by writing to Dr. Edwin S. Chappell, Director of Professional Education, Veterans Administration Hospital, North Little Rock, Arkansas.

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Journal of the Tennessee State Medical Association

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The infant mortality rate in those delivered by cesarean section is greater than those delivered by the normal route. It is therefore important that the management in section cases be the best possible to reduce the difference in mortality.

IMPROVING INFANT SALVAGE WITH CESAREAN SECTION

SAMUEL S. LAMBETH, M.D., Maryville, Tenn.

Progress has been made in the reduction of maternal deaths after cesarean section. This has naturally stimulated tremendous interest in the operation as the best method of handling many obstetric complications. This interest is shared alike by physicians and laymen.

Unfortunately, statistics show clearly that the infant does not fare as well as the mother after the operation, the downward trend in mortality being much less sharp for the baby than for the mother. It is unfortunate that the average layman frequently believes cesarean delivery is safer for the baby. On some occasions physicians, too, show ignorance on this point. This may create a contradictory situation for the physician. It must be recognized that a certain number of cesarean operations will be done because the procedure offers a safe way for the mother to be relieved of an obstetric difficulty. Physicians must be educated about the indications and contraindications for the operation, particularly about conditions in which cesarean section is much more dangerous for the baby than vaginal delivery.

At the same time physicians have a real challenge to make cesarean delivery less hazardous for the baby. The purpose of this presentation is to show how this challenge is being met in Blount Memorial Hospital, a general hospital of 125 beds in Maryville, and to offer suggestions for further improvement in our infant salvage.

Table 1

Infant Mortality—August 1, 1947, to April 1, 1949

Total deliveries	1,934
Total stillbirths and neonatal deaths	62
Total infant mortality	3.2%
Total cesarean sections	97
Cesarean stillbirths and neonatal deaths	9
Cesarean infant mortality	9.3%
Total vaginal deliveries	1,837
Stillbirths and neonatal deaths with vaginal delivery	53
Vaginal delivery infant mortality	2.9%

Table 1 incorporates data which were presented in a report[1] to the staff of Blount Memorial Hospital in 1949. The infant mortality figure of 9.3 percent was uncorrected. Although it was high, it compared very well with current figures from other institutions, such as Chicago Lying-In (9.2%)[2] and Rochester (N. Y.) General Hospital (7.9%).[3] All figures in this report included stillbirths and those dying within the first ten days of life.

Table 2

Infant Mortality—April 1, 1949, to April 1, 1951

Total deliveries	2,366
Total stillbirths and neonatal deaths	70
Total infant mortality	3.0%
Total cesarean sections	120
Cesarean stillbirths and neonatal deaths	6
Cesarean infant mortality	5.0%
Total vaginal deliveries	2,246
Vaginal delivery stillbirths and neonatal deaths	64
Vaginal delivery infant mortality	2.9%

Table 2 presents the infant mortality statistics in this hospital for the following two years. These infant mortality figures likewise are uncorrected. The reduction of the death rate from 9.3 percent to 5.0 percent is reassuring. It is more significant when one learns that the incidence of cesarean sections remained the same (5%)

Table 3

ANALYSIS OF CESAREAN STILLBIRTHS AND NEONATAL DEATHS—AUGUST 1, 1947, TO APRIL 1, 1949

Indication for Section	*Anesthetic*	*Approximate Size of Infant*	*Cause of Death According to Available Data*
1. Abruptio	GOE*	Non-viable (Est. 6 mos.)	Prematurity
2. Abruptio	Cyclo*	Term	Abruptio Stillbirth
3. Toxemia Rh problem	Spinal	Term	Toxemia Rh problem Stillbirth
4. Transverse Lie	Spinal	3 lbs. 15 oz.	?Atelectasis Neonatal
5. Disproportion	Cyclo	5 lbs. 10 oz.	?Atelectasis Neonatal
6. Tuberculosis	Spinal	3 lbs. 13 oz.	?Atelectasis Neonatal
7. Repeat	Spinal	5 lbs. 2 oz.	?Atelectasis Neonatal
8. Repeat	Cyclo Pentothal	4 lbs. 8 oz.	?Atelectasis Neonatal
9. Abruptio	Spinal	Near Term	Jaundice Anemia Rh problem Neonatal

*GOE=gas-oxygen-ether; cyclo=cyclopropane.

Table 4

ANALYSIS OF CESAREAN STILLBIRTHS AND NEONATAL DEATHS—APRIL 1, 1949, TO APRIL 1, 1951

Indication for Section	*Anesthetic*	*Approximate Size of Infant*	*Cause of Death According to Available Data*
1. Previous Difficult Vaginal Delivery	Cyclo	6 lbs. 6 oz.	?Congenital thymus (lived 72 hours)
2. Disproportion	Spinal	3 lbs. 15 oz.	Cerebral hemorrhage (lived 4 hours)
3. Transverse Lie	Spinal	3 plus lbs.	?Atelectasis (lived 26 hours)
4. Abruptio	Cyclo	2 lbs. est.	Severe prematurity (Est. 6 mos. preg.) Stillbirth
5. Repeat	Cyclo	No wt.	Anencephaly Stillbirth
6. Abruptio	Cyclo	No wt.	Abruptio Prepartum death

throughout the period of the study. A comparison of Tables 1 and 2 shows that the infant mortality after vaginal delivery remained unchanged, which also makes the cesarean infant salvage figures more impressive.

Tables 3 and 4 analyze the infant deaths in several respects. It may be significant that none of these mothers had hard labor before operation. Bloxsom[4] has commented repeatedly on the importance of labor in the conditioning of the infant to promptly initiate his respirations. The indication for section will naturally affect the infant result. If cesarean section is performed often for severe toxemia or premature placental separation, the infant loss will be higher. One of the best ways to reduce the infant loss is to have a good indication for the operation. The rest of the analysis includes factors which are considered important in infant salvage. The number of premature infants is significant. The cause of death cannot be definite because no autopsies were performed. The clinical diagnosis of possible atelectasis was made when the infant developed cyanosis, rapid respirations and pulse, and physical signs of lung disease. Possibly, for some of these, the diagnosis should be the shock syndrome which Landau[5] has described in infants delivered by cesarean section. A comparison of Tables 3 and 4 shows that the frequency of this syndrome has been reduced sharply in the last two years.

Table 5

HOW TO IMPROVE INFANT SALVAGE WITH CESAREAN SECTION

1. Use regional anesthesia for the operation.
2. Permit trial of labor before operation whenever possible.
3. Secure a physician to care for infant in operating room.
4. Clear infant airway and aspirate stomach contents.
5. Give infant continuous oxygen and incubator care for 24 hours.

Table 5 presents suggestions for improving infant salvage after cesarean section. We believe that closer attention to these five points in the last two years has improved our results. The use of regional anesthesia has been urged by Dieckmann.[6] General anesthesia probably puts an added strain on the infant.

Permitting a trial of labor before operating whenever possible will reduce the number of premature infants delivered by abdominal section. Dieckmann[6] stated that prematurity was a factor in 57 percent of the infant deaths in his series. We believe labor is most important in preparation of the infant to start breathing promptly. Huber[8] has also recently commented on the seriousness of section for the premature infant.

A physician in the operating room solely for the care of the baby may seem a luxury which could be dispensed with in these times of personnel shortages. We want to stress that by such precautions the results in a smaller general hospital will equal those in an institution with a large resident staff.

Attention to the infant's airway consists chiefly of aspiration of the mucus from the pharynx, and sometimes the insertion of a tracheal catheter. Aspiration of the stomach contents has become routine since it was advocated by Gillis,[7] White, and Pfeffer, in 1949. This procedure may be quite important in the reduction of the frequency of pulmonary complications in our infants. (Compare Tables 3 and 4.)

The administration of oxygen and maintenance of body warmth are accepted procedures for the care of the newborn. In this connection, the idea of Bloxsom[4] to administer the oxygen under a system of cycling pressure may be very helpful in further reducing the loss of asphyxiated infants. We have not had the opportunity to utilize this method in our hospital.

Another procedure which is used more often in our operating room is draining the placental blood into the infant. Landau[5] and Dieckmann[6] have commented on its importance in prevention of shock-like syndrome after cesarean delivery. The increased use of this technic may be a factor in reducing our neonatal deaths (compare Tables 3 and 4).

Summary

1. An analysis of the infant deaths after cesarean section in Blount Memorial Hospital has been presented.

2. Our statistics show that a reduction in these deaths has been made.

3. Factors involved in these deaths and suggestions for further improvement in infant salvage after cesarean section have been discussed.

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From a General Practice Clinic comes timely advice on the subject of adequate examination of the woman post-partum. This is an important facet of preventive medicine.

BOSTON MEDIC

POST-PARTUM EXAMINATION*

PAUL WILLIAMSON, M.D., Memphis, Tenn.

The post-partum examination is a frequently neglected part of obstetrics as practiced by the general physician. There is much to be learned and, as a prevention against future trouble, the post-partum check can be valuable. Most doctors see casually the women they deliver, some time after delivery. Many of the better practitioners do a reasonably good examination at six weeks. However, few busy physicians take the necessary time to examine thoroughly the post-partum woman.

There are not a few diseases made worse by pregnancy and delivery. For example, a significant number of women who were hypertensive during pregnancy will be found to have an essential hypertension upon subsequent examination. The pregnancy is obviously not the cause, but it is undoubtedly a potentiating factor.

Obstetrical complications that are amenable to discovery or treatment at this time are easily passed over unless a good history and examination is done. In our clinic we find it advisable to examine at two weeks and six weeks. This first examination is truly a casual check for the more common and dangerous complications of the puerperal period. The six week check up is a thorough history and physical examination with indicated tests done without delay.

History

The puerperal woman should be asked about her feeling of general well-being, her appetite, the presence of fatigue and whether or not she gets adequate restful sleep. With progress of modern obstetrics the average woman six weeks after delivery should feel well and should have no manifestations related to delivery. It is of course to be expected that the care of a young baby will be demanding in time, and that the woman will suffer a degree of fatigue from this.

One should ask about the presence of headache and whether there are any changes in vision. Either symptom may be related to the presence of hypertension but is found in other common diseases also. Their presence or absence should be noted on the chart. Cardiac and pulmonary disease is relatively infrequent as compared with statistics of past years. However, the patient should be asked about cough, pain in the chest and shortness of breath.

It is well to inquire carefully into the condition of the breasts. Whether there is pain on nursing and whether the breasts are filled and hard and tender. Inquiry should be made about soreness in any particular part of the breast or pain in the axilla. Many women wear improper brassieres during the puerperal period and many try to use old brassieres in which the cups are of insufficient size to hold the enlarged breast.

In discussing the abdomen two minor points are of importance. They are the presence of constipation and whether or not the abdominal muscles feel "flabby." If these signs are present, it is usually an indication that the woman has failed to follow her instructions for post-partum exercises. She should be warned that very little more time exists in which to bring her figure back to normal and her cooperation should be insisted on. One should ask also about abdominal pain and gastric distress.

In discussing the pelvis one should inquire about pelvic pain and, if it is present, whether it is the cramping pain of retained secundines or the steady pain of an infection. Also, if pain is present, whether it is relieved by sitting or lying down. The sore episiotomy is characterized by pain on pressure as when sitting on a hard chair.

---

*From the Section on General Practice, University of Tennessee College of Medicine, and John Gaston Hospital, Memphis, Tenn.

In the presence of relaxed uterine support the patient will have a feeling of weight in the pelvis while standing, and with severe descensus the cervix may present at the vaginal opening. A check should be about discharge, its color and whether or not the odor is offensive.

The patient should be questioned about pains in the legs and if present, the character of the pain, as well as about edema and the presence of varicose veins.

Examination

The examination may be the typical routine physical examination abbreviated in some parts. The obstetrical chart should contain a record of blood pressure, temperature, pulse and respiration. The ocular fundi should be examined and any deviation from the normal noted. Size of the heart and quality of heart sounds should be noted and, particularly if infection is suspected, the presence or absence of dullness or rales in the lungs. Nipples should be inspected for fissures and the quadrants of each breast palpated individually.

Presence of striae on the abdominal wall should be noted and the rectus muscles examined for diastasis. The ureters should be checked for tenderness by making firm pressure about two inches lateral to the umbilicus and rolling the uterer against the spine. In examining the pelvis, the condition of the episiotomy, if one has been done, should be noted carefully. At six weeks there should be little, if any, tenderness of the episiotomy wound and firm pressure made along the internal limb of the incision should reveal no gaps in the repair of muscles. The presence of cystocele and rectocele should be checked for and, if present, the degree of relaxation should be noted.

The cervix should be firm and well contracted at six weeks. Many women show a degree of cervicitis but in most instances this will heal spontaneously.

There should be little if any pain on motion of the uterus. The parametrial area should show no bogginess and tenderness should be absent. The corpus of the uterus remains slightly enlarged at six weeks in about 50 percent of women. This is not to be taken as subinvolution of the uterus. At six weeks there will be normally some relaxation of uterine supports with a minor degree of descensus. The relative amount of descent of the uterus should be noted on the chart.

The tubes are rarely palpable and the ovaries are usually normal with one possible exception. The corpus luteum may remain palpable as an enlarged rounded body which gives the clinical feel of an ovarian cyst. It is most important that these not be considered ovarian cysts until checked further.

There is too much tendency to "slide over" this pelvic examination which should be thorough, extensive and complete.

The legs should be inspected for signs of venous thrombosis and the general posture of the woman should be evaluated carefully. The evaluation of carriage and posture is most important and should not be neglected.

Discussion

In our clinic we have seen many women whom we refer to as "obstetrical cripples." These are women in their forties and fifties who have had chronic pelvic disorders since childbirth. We have not had the facilities to make accurate scientific study of these women but have gained some distinct clinical impressions.

We feel that the trouble which these patients have is not due to poor obstetrics but rather to poor post-partum care, many times on the part of the woman herself. The common lesion we have found is a chronic parametritis with soft, boggy, parametrial tissues and chronic mild pelvic pain and resulting relatively constant minor discomfort. We believe this is due to invasion of these tissues by bacteria of low pathogenicity in the puerperal period. While our patients have been followed only a very few years we believe that intensive treatment of these lesions when discovered at the six week examination will do much to relieve these women in future years.

Further Studies

At the six week checkup the patient should have an urinalysis and a determination of hemoglobin although a complete blood count is preferable. If there is suspicion of pelvic infection, a smear and culture of the urine discharge should be made. In those women who have hypertension during pregnancy, a cold pressor test should be performed routinely. We are not prepared to evaluate this procedure but use it as a possible index to those who will develop essential hypertension at a later date.

Treatment

No attempt will be made in this brief paragraph to go into details of treatment. Rather, there follows a summary of the simple treatment of some common disorders of the puerperal period.

Pelvic infection responds well to exhibition of the antibiotics and to the local application of heat, preferably in the form of diathermy. The cervicitis may be treated by one of the suppositories designed to correct vaginal pH. Vinegar douches will do the same thing. We do not recommend cautery of the average cervical lesion until three to four months post-partum.

Lacerations of the cervix, neglected perineal lacerations and various relaxations of supporting structures are surgical lesions. Many post-partum retroversions may be avoided by the insertion of a well fitted pessary at the six week examination. One should remember, however, that there is much controversy about the use of a pessary. Although many fine obstetricians recommend this procedure, it is well to watch for the future evaluation of this procedure in current literature.

Committee on Fractures and Other Traumas, American College of Surgeons, The Care of Hand Injuries: Requirements of Early Definitive Treatment.

First aid of hand wounds is relatively simple since it consists solely of protection for the injured member. This should consist of protection against infection, added injury, future disability and deformity. Such an end may best be accomplished by a sterile, immobilizing, protective dressing applied with the part in the position of function.

In general, the requirements for early definitive care are led by a proper evaluation of the nature and extent of the injury. This should answer questions as to the causative agent of the original injury, the character of the first treatment given, extent of infection or contamination, and the structural damage present. The structures involved may be determined by function tests for muscle, tendon or nerve damage, and by X-ray for foreign bodies, fractures or joint injuries.

Treatment should only be undertaken by someone familiar with the anatomy and physiology of the hand, and by such a person only with adequate lighting, instruments, anaesthesia and assistance. A bloodless field for surgery of the hand should be established by the use of a pneumatic tourniquet or blood pressure cuff. After this preparation, careful cleansing of the wound and its adjacent areas with soap and water is essential. Meticulous inspection of the wound and adequate exposure of the damaged parts should be carried out together with a removal of all devitalized tissue sparing those areas of skin, bone, tendon and nerve which might be viable. Hemostasis, reapproximation of the divided nerves with fine interrupted perineural silk sutures, repair of soft tissue damage in clean, or cleansed wounds (never in the presence of established infection), and reduction of fractures or dislocations may then be attempted. After this is done the hand should be immobilized in the position of function to such an extent as may be required for healing. Antitoxin and antibiotics should be used as indicated.

The after treatment of hand injuries is of considerable importance. This should include elevation and rest of the hand, postponing dressings except in the presence of suppuration, and early restoration of skin coverage by grafts. Early active motion to the greatest extent that will not interfere with healings is essential and this should begin with the unaffected parts and include the involved parts as soon as possible. (Abstracted by Benjamin F. Byrd, Jr., Nashville, Tenn.)

The author describes his experiences with the newer artificial eye implants.

INTEGRAL IMPLANT FOLLOWING ENUCLEATION*

JOHN MONTGOMERY, M.D., Knoxville, Tenn.

In the fall of 1946, at the meeting of the Academy of Ophthalmology and Otolaryngology, we first saw moving pictures of movable implants following enucleation. Their cosmetic appearance was excellent and there was repeated spontaneous applause from the audience. The movements of the prosthesis were very good, being superior to the older type of buried implant. The pictures gave Ruedemann's technique and results in his combined implant and acrylic eye, the posterior portion being of tantalum gauze, the anterior segment of acrylic. This implant was not used widely.

Soon afterwards, Cutler designed the ball and ring implant, in which the muscles and Tenon's capsule were sutured to a ring. The anterior surface of the implant presented an opening in which a pin fixed to the prosthesis could be inserted. This allowed the technician to place the peg in any position on the posterior surface of the prosthesis and would automatically correct poor positioning of the implant. It was in 1948 that the American Optical Company issued their so-called "Stone-Jardon" implant. There was a band of tantalum gauze anterior to the equator of the implant and the muscles and Tenon's capsule were attached to this. In the beginning, 5-0 tantalum wire was used to secure the tendons; later, a metal prong was substituted for attachment of the tendons. The original Stone-Jardon implant was available in sizes of 15 and 19 millimeters. The present implants are available in one size only, 18 x 17.5 millimeters, which appears to be satisfactory for all cases except in the very young.

Other implants with which we are not familiar include the Allen buried implant, in which the opposing recti muscles are passed through tunnels and are sutured on its anterior surface.

During the years of 1946 to 1948, we continued to hope that integral implants could be made available for patients in medium circumstances. Few of our patients were able to go to one of the larger centers for the fitting of the prostheses. It was not until early in 1949 that the local branch office of the American Optical Company made available to us the integrated implant that we are now using in the majority of our enucleations. We have always felt that young people dreaded enucleations because of the resulting poor cosmetic appearance. The ectropion and sagging of the lower eyelid were especially noticeable and the contour of the upper eyelid was rarely good. The fitting of the shell has now become more or less a simple procedure. The shell is supported by a peg inserted into the implant, and the contour of the upper eyelid is much better. Patients are grateful for the movement and the improvement in the general appearance of the socket. (The over-all increase in costs is only twenty-five dollars. The optical company charges the patient fifty dollars for the combined implant and shell prosthesis.)

Our first case was done in May, 1949, the diagnosis being phthisis bulbi with recurrent inflammation. The patient was extremely shy. He had read an article in one of the magazines describing the integral implant and inquired concerning it. In this, our first case, there was poor positioning of the implant, it was in a diverging position. However, the technician was able to attach the peg in such a manner that all divergence was corrected. The result was far beyond our expectations, and the patient was overjoyed.

Since that time, we have suggested this procedure in most of our cases with the exception of the very young and the very old. To date, we have used the integrated implant in twenty cases, the youngest being four and one-half years of age and the oldest sixty-six years of age. There were eight (40%) in the four to ten age group, one (5%) in the ten to twenty age group, six (30%) in the twenty to forty age group, and five (25%) in the forty to seventy age group. To date we have had no extrusions. In four, we had considerable increase of secretion over what we would expect when using the buried implant. These have been controlled in all cases with our routine socket care. The following typed instructions are given to each patient:

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*Read before the Tennessee Academy of Ophthalmology and Otolaryngology, Nashville, Tenn., April 9, 1951.

(1) Never remove the prosthesis.

(2) At bedtime, place one-fourth inch of penicillin ointment inside the lower eyelid.

(3) Each morning, after washing the hands thoroughly, lie down and irrigate the eye, without removing the artificial eye, with salt solution (one teaspoon of salt to one quart of water that has been boiled for 20 minutes and allowed to cool.) Use a rubber ear syringe and separate the eyelids with the forefinger and thumb. Place the tip of the irrigator at the inner angle of the eye and attempt to irrigate beneath the shell. Following the irrigation, instill two or three dropperfuls of 1:3000 zepharin solution.

(4) Keep clean tissue on hand at all times for cleansing the eye margins. (Do not use handkerchief.)

(5) Do not immerse the head when swimming.

There are other precautionary measures that could be added to this routine; however, we felt it should be kept as simple as possible. We do instruct our patients to return to the office immediately on noticing any increase in secretion or pain.

In this group, we have found only one patient to be allergic to penicillin. We substituted sulfacetamide ointment, 10 percent, and he had no further trouble. In six cases, granulation tissue was noted. In three cases, it was necessary to exercise the granulation tissue. In the remaining cases, local applications of a mild silver solution, in addition to the routine eye care, relieved the condition. We have had practically no difficulty with discharge nor granulation tissue since instructing our patients never to remove prostheses.

There has been some mesh exposure in approximately 50 percent of our cases. In two of these cases the exposure of the mesh is rather pronounced to the point that in one case the insertion of the inferior rectus muscle is exposed. An attempt was made to resuture the conjunctiva to the neck of the implant; however, retraction again occurred, and we felt it best not to interfere further. The remaining cases that showed mesh exposure were very slight and we felt no attempt should be made to correct them.

Approximately 50 percent of the twenty cases were done under local anesthesia. The operative technique is not difficult. It consists mainly in performing an enucleation in the usual manner with as little trauma to muscles, retro-orbital tissue and Tenon's capsule as possible. A silk suture is placed in the four recti muscles, and they are severed as close to the globe as possible. All bleeding is controlled to reduce the possibility of post-operative hemorrhage. Various means are used to place the muscle on the implant. We first used tantalum wire sutures, we next used metal clips, and now we are using 4-0 and 5-0 silk, and, in a few cases, 5-0 dermalon. We have found it is not necessary to take extreme care in placing the muscles so many millimeters from the neck of the limbus. We suture the muscles 1 to 2 millimeters anterior to the equator of the implant. Any poor positioning of the implant is corrected by proper placing of the peg onto the posterior surface of the shell. We make sure the implant is placed well into Tenon's capsule. A purse-string suture is placed in Tenon's capsule, and another is placed in the conjunctiva, both drawn snugly around the neck of the implant. Penicillin ointment is instilled, and a peg conformer is placed in the socket. Both eyes are bandaged for four days with a firm pressure bandage.

In the pictures we are about to show you, the first three cases present the old type buried implant and serve as comparison to the integral implants. We do not have pictures of our last eight patients. We are now using the new A. O. monoplex integrated implant. This implant is more simply made, without grooves, without metal prongs and without the lateral flange. It is giving better results than some of its predecessors, with less recession, granulation tissue, etc.

No attempt has been made to use the

integral implant as a delayed implant in Tenon's capsule. We have been tempted on a few occasions, but we have resisted the temptation thus far.

In *summary*, we expect to continue the use of the integral implant so long as we have the results we are about to show you. The appearance of the eye is very important in both business and social life. We believe in integral implants, for they give our patients far better movement and appearance. Finally, we would like to say that our re-

Table I

Patient	*Age*	*Date Opr.*	*Diagnosis*	*Granulation Tissue*	*Exposure of Mesh*
P.O.	36	10-22-47	Chronic iridocyclitis (severe, right eye) Secondary glaucoma (right eye)		
P.L.A.	60	11-12-49	Melanoma of choroid (left eye)		
W.J.B.	2½	3-15-50	Glioma of retina (right eye)		
R.H.	23	5-25-49	Phthisis bulbi (right eye)	++	+
A.R.	43	6-4-49	Laceration of cornea, (extensive, with prolapse of lens and uveal tissue, left eye)		+
N.L.	4½	7-6-49	Intra-ocular hemorrhage, retinal detachment (left eye). Toxoplasmosis?	++	+
R.L.H.	7	7-28-49	Laceration of cornea, ciliary body (right eye, extensive with prolapse of uveal tissue)		+
M.R.	17	8-31-49	Phthisis bulbi (right eye)	++	
E.S.	61	9-14-49	Retinal detachment (right) Chronic iridocyclitis (right)		+
A.P.T.	9	12-10-49	Panophthalmitis (right eye)	+	
P.J.	9	1-5-50	Laceration of cornea, and sclera (right eye, with prolapse or ciliary body and hyphemia)	+	
????	43	1-18-50	Panophthalmitis, secondary (left eye)		
M.P.	5	5-27-50	Laceration, cornea (left, complete with collapse of globe)	+	
C.M.	24	2-15-50	Buphthalmos, congenital (left eye)		+
C.M.	24	5-3-50	Buphthalmos, congenital (right eye)		
H.H.S.	5	12-23-49	Intra-ocular foreign body (right eye)		
C.D.	38	6-28-50	Laceration, cornea (right, with prolapse of lens and uveal tissue)		
G.L.G.	7	8-9-50	Chronic iridocyclitis (right eye, with sympathetic ophthalmia, left eye)		
L.D.W.	4½	8-30-50	Panophthalmitis (right eye)		
M.M.	66	9-6-50	Glaucoma (absolute, right eye)		
R.F.B.	49	10-14-50	Melanosarcoma (right eye)		
J.D.	32	1-10-51	Glaucoma (absolute, left eye); Ectasia, cornea; Staphyloma, sclera; Corneal scarring)		
W.E.C.	34	2-25-51	Laceration, cornea (left eye, with prolapse, lens, vitreous and uveal tissue)		

sults would have been better had we never used the tantalum wire sutures and the metal prongs.

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The Surgically Removed Ovary, Hall, J., M.D., Am. J. Obst. & Gynec., 62:1307, 1951.

Since the ovary is an endocrine gland, its presence is necessary for the maintenance of the normal function of the body, not only for normal reproduction but also to maintain the normal balance of the entire female economy. Its removal, therefore, should be done only when it has ceased functioning or its retention would be detrimental to the health of the individual. It is undoubtedly true that the normal ovary is removed during many abdominal operations without enough consideration of the disturbance oophorectomy may produce. It is probable that the ovary functions as an organ of internal secretion long after oogenesis has ceased. The study of 665 cases in which the ovaries were surgically removed has revealed the following facts and permitted certain opinions to be formulated: Although the presence of follicular cysts is usually not considered significant, in this series 45.1% were associated with hypermenorrhea and 64.6% with myomas of the uterus. The benign serous and pseudomucinous cysts occurred about equally in all age groups. The malignant form of the pseudomucinous cyst affects an older age group than the serous type. The large majority of patients having benign cystic teratomas were between the ages of 21 and 40 years. Two-thirds of the patients having fibromas of the ovary were over 45 years of age. The removal of any ovary from a patient under 30 years of age should be done only after a qualified observer has declared that the ovary is abnormal or associated disturbances require oophorectomy. It is urged that normal ovaries should not be removed from women under 45 years of age at the time of hysterectomy for benign lesions. There is no increased incidence of ovarian cysts subsequent to hysterectomy. The advantages experienced from retaining a normal ovary in the women under 45 years of age far outweigh the slim possibility of the development of a primary ovarian malignant tumor. No instance of a primary ovarian malignant tumor occurred in a retained ovary in 71 cases studied. All women in whom ovaries have been retained during a hysterectomy should have pelvic examinations every six months even though the development of pathologic disturbances in such ovaries is rare. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

What's New

Clinical and Laboratory Observations in Autoimmune Hemolytic Disease, Young, L. E., Miller, G., and Christian, R. M., Ann. Int. Med., 35:507, 1951.

The term "acquired hemolytic anemia" has been used to include those cases of anemia due to hemolytic processes. The authors consider here the cases of this group in which "patients have developed antibodies reacting with their own red cells." The origin of such antibodies is unknown but appear in instances of leukemia, the lymphomas, carcinoma, sarcoidosis, tuberculosis and disseminated lupus. The hemolytic anemia may be the first manifestation of disease.

The antibodies attached to the red cells can be shown by mixing washed red cells with antiglobulin rabbit serum (from rabbits immunized with normal human gamma globulin). The auto-antibodies can react to cells of all types. This is shown by the fact that normal cells, transfused into patients of this group, show spherocytosis, increased fragility and are destroyed. The contrary is true of normal cells transfused into patients having hereditary spherocytosis.

Splenectomy has helped some of these cases. ACTH and cortisone has been reported to be helpful in maintaining remissions in some of these patients. Cross-matching for transfusions is difficult since the auto-antibodies may cause agglutination.

PREFERRED PROCEDURES

This is a review of wounds—wounds associated with fractures—with particular emphasis on emergency care.

COMPOUND FRACTURES

HUGH SMITH, M.D., and FRANCIS V. COSTELLO, M.D.,* Memphis, Tenn.

Safety programs undoubtedly help, but corn pickers and gin saws and automobiles continue to take their toll in relentlessly increasing numbers. Injuries reminiscent of war surgery are all too common. The less dramatic compound fractures if improperly handled can assume catastrophic proportions. Even though the reader does not treat compound fractures or major wounds, the smaller wounds must be treated properly and the principles of treatment are pretty much the same for all degrees of trauma.

Assuming that the injury is of major proportions, priority dictates general and local treatment to save life, and subsequently the limb. The time-tested five S's cover this situation: shock, splint, surgery, serum and sulfa or antibiotics.

Shock. Even the most resolute individual may develop a fear of impending doom when he beholds his bone protruding through the skin, and sees and smells a fair quantity of his own blood. The over-zealous people (or doctors) who with a misplaced sense of urgency move these patients without listening to their cries or pain contribute quickly to a cycle that produces or exaggerates a state of shock, viz., circulatory collapse. Here are the steps in immediate treatment.

1. *Intravenous morphine.* To allay fears and lessen pain promptly, and substitute a mild state of euphoria in preparation for the things yet to be done, administer intravenous morphine as follows: dissolve morphine, grs. ¼ (or comparable narcotics) in 5 cc. of water. Using a small caliber needle, inject this solution drop by drop, I.V. (3 to 5 minutes) until the patient is relieved and relaxed. Side effects are no contra-indication to intravenous administration. Merely proceed more slowly. Perhaps one-quarter or one-half the dose will be enough to accomplish rapidly the desired effect, particularly in elderly people. This is a simple and easy method of obtaining prompt response with accurate dosage. Atropine may later be given in a similar manner immediately prior to operation.

2. *Stop-gap treatment.* For a severe state of shock induced by hemorrhage, "there is nothing like blood to replace blood." This form of treatment, however, is not always immediately available. In the interim, to maintain circulatory volume and sustain life, administer plasma or saline and 10% glucose, intravenously. Blood loss means not only reduced volume but reduced red blood cells and hemoglobin. While the injection of innocuous solutions into the circulatory system increases fluid volume and thereby a desirable temporary effect, it does not provide for replacement of the cellular and chemical elements so essential for maintenance of vital organs,—thus the emphasis on blood transfusions in adequate volume as soon as possible.

3. *Hemostasis and dressings.* Do not attempt any definitive treatment (manipulation, surgery, or clean-up) of the local wounds at the scene of the accident or as an office maneuver. (Other fallacies: dusting the wound with sulfa powder; applying tincture type of antiseptics to a raw wound.) Preferably cut away clothing and cover the wound with copious dressings. Keep these in place with an elastic bandage. A compression bandage of this type will, in most instances, provide adequate hemostasis. Do not apply the bandage so tightly that it obstructs the venous circulation. Occasionally a severed vessel may be conveniently situated for the application of a hemostat. Rarely bleeding will require a tourniquet. (The application of a blood pressure apparatus to your own arm with tourniquet pressure [400 mm. of mercury] for 30 minutes will be rather convincing evidence against the general use of a touriquet.) A patient can stand the pain of an avascular extremity for only a limited time. The injudicious use of a tourniquet invites paralysis or even worse, gangrene, with prolonged use. When the tourniquet is finally removed hemorrhage is likely to be profuse. Consequently, frequent removal and reapplication of the tourniquet is not desirable.

4. *Splinting and position.* Immobilization is mandatory prior to transportation. For some unexplained reason, splints seem to have become unfashionable, or are we lazy? "Splint 'em where they lie" is a sound dictum because: continual jockeying or overlapping of the bones causes pain, muscle spasm, soft tissue damage, hemorrhage, and shock, or the sharp ends of the bones may even cut important structures. Practically any fracture of the lower extremities can be securely immobil-

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*From the Campbell Foundation, Memphis, Tennessee.

ized by a Thomas splint with a foot piece. This underrated piece of apparatus is an essential but simple piece of equipment. Improvised splints and bandages are adequate for the forearm; a Velpeau dressing splints the upper arm.

After splintage, elevate the foot of the stretcher or bed—an effective but neglected means of getting more blood to the vital areas. Contra-indications: chest or head injuries.

5. *Heat—antibiotic therapy—oxygen therapy.* Heat should not be applied to dilate further a limpid peripheral circulation, but to the body, simply to protect the patient from getting chilled. Antibiotic therapy should be instituted promptly—aqueous penicillin, intramuscularly. Oxygen therapy, preferably by nasal tube, helps air hunger and cyanosis but otherwise is not necessary.

These measures should be carried out with this objective in mind,—rapid resuscitation to a point permitting definite treatment of the injured extremity at the earliest possible time. Blood pressure and pulse recorded at regular intervals are the best indicators of things to come, good or bad. Surgery ordinarily is not advisable until the blood pressure remains steady at 100 mm. or above.

Surgery. Despite the emergency, do not rush into surgery before an accurate appraisal of injuries. Multiple injuries from an automobile accident seem to be the rule rather than the exception. Too often the drama or tragedy of a mangled leg leads one away from other serious injuries that lurk beneath the surface:—a fractured pelvis with a ruptured bladder; a ruptured viscus; a punctured lung; or perhaps additional fractures or dislocations in the same extremity. A thorough examination with adequate use of the X-ray is in order. These should be obtained with a minimum of moving and maneuver. A little rough handling can re-establish shock and further delay surgery. Repetitive inspections of the wound by the intern, then the resident and finally a staff surgeon or so is unnecessary and harmful. Further, a really accurate appraisal of wound damage is not possible until its depths have been cleaned and exposed. Before anesthesia an accurate check for any functional impairment of nerves, tendons and blood vessels should be made.

Other than simple wounds of the skin and subcutaneous tissues, surgery should be carried out under general anesthesia. The job at hand is frequently a longer and harder procedure than originally anticipated. One should prepare for the worst, viz., having an adequate quantity of blood, plenty of help and the equipment available for any surgical contingency. Major injuries are usually sufficiently impressive to insure proper preparation.

Appraisal of Wounds. Each region of the body has certain special considerations, but there are general principles which apply to the analysis of all wounds wherever they occur. An appraisal as to severity and the length of time from injury to definitive treatment, will influence the following considerations: the necessity or the extent of surgery; the feasibility of extensive reconstruction procedures; the advisability of inserting foreign material for internal fixation of a fracture, such as plates or screws, or medullary rods; and, finally a decision as to closure or drainage.

Severity of the wound is based on the extent, the damage and devitalization of tissues and the amount of foreign material. The extent of the wound is not gauged by the length of the superficial laceration. This is really not important. The depth of the wound and the structures that are cut are the principal considerations. In general, structures have healing capacity and resistant qualities in proportion to their blood supply. Thus the deeper injuries, which involve muscles, tendons and bones are far more severe than those of superficial tissue. The severity of the wound increases by geometrical rather than arithmetical proportion in the presence of extensive necrosis and foreign material. Necrotic tissue sets up an optimum condition for the growth of bacteria. Since blood supply has been cut off, antibiotics can only form a peripheral ring of protection about an infected necrotic area. Foreign material further complicates the situation. "The pabulum of infection is a brew made up of necrotic tissue, blood clot and foreign material."

The time factor is most important. A wound unattended but contaminated eventually becomes infected. An infected field is not an appropriate area for extensive surgery and reconstruction procedures. In fact, it only aggravates an already serious situation. In general the following time intervals are arbitrarily recognized: under

12 hours, contamination; over 12 hours, infection. This is a rule of thumb, which must be varied considerably according to the situation which exists. For example, a cut from a knife or a piece of glass or even a bullet wound, although neglected, may never be infected. Perhaps even 24 hours after the injury it may be possible to carry out extensive surgery in such a field. On the other hand, some wounds may be considered infected the instant they occur. For example, a shotgun or a mangling wound of the thigh.

Using these criteria, wounds should be classified as Type I, II, and III:

Type I. This wound is pretty clean with no devitalization or foreign material. Extensive reconstructive procedures permissible with excellent chance of healing per primam.

Type II. An extensive wound with some foreign material and necrosis which superficially looks pretty bad. We may perhaps after surgery be able to clean it up to the point that extensive reconstructive surgery may be feasible and practical and finally even permit a closure of the wound.

Type III. These are the bad ones presenting extensive necrosis and much foreign material that cannot be eliminated. Anatomy itself imposes certain restrictions on the extent of debridement. This wound is not a propitious field for extensive surgery. It must be considered infected from the beginning, and suitable only for excisional surgery and drainage.

Local preparations.

1. Wrap out the limb with an elastic bandage and apply a pneumatic tourniquet. This, of course, is not feasible if the wound is too close to the hip or the shoulder.
2. Place sterile dressing over the wound and gently scrub with Phisaderm or soap and water in ever widening circles beginning at the periphery of the wound. Vigorous scouring with stiff brushes is not necessary. Work all dirt away from the wound.
3. Shave the same way. The important thing with both scrubbing and shaving is to do it extensively—keep the field ample, so that later the incision may be extended in either direction.
4. Cleanse the skin with ether and paint with merthiolate or idoline and alcohol (not necessary if Phisaderm is being used).
5. Drape the field as for sterile surgery, providing for easy maneuver of the injured extremity.

Treatment of the wound.

1. Irrigate the wound with copious amounts of saline, massaging the dirty tissues with your finger as you continue to irrigate. This loosens debris and helps float it to the surface. Do not use caustic antiseptics in open wounds; this causes more tissue necrosis and seals off crypts of organisms and debris, encouraging infection.
2. Debridement. Extend the wound for adequate exposure of its depth, including both fragments of the fracture. In excising skin edges, be frugal; you may want to close the wound. Excise all devitalized fat, muscle and fascia that is necrotic or cannot be adequately cleaned. This is best done by block excision with a pair of scissors. Large quantities of muscle can be spared, so be generous. Excise back to healthy bleeding tissue. Major arteries and nerves must, of course, be spared in this excisional process. Resistance of bone to infection is low, so be meticulous in cleaning the ends of the bones, as well as the wound. If bone ends cannot be cleaned satisfactorily, nip off or scrape off the dirty portions but preserve loose fragments if attached to soft tissue.
3. Irrigate the wound again. If you feel that by this procedure you have created a relatively clean surgical field (Type I), you may proceed with suture of tendons or nerves, or apply metallic internal fixation to the fracture. This is a major decision that requires surgical judgment. There is a saying, "surgical judgment is based on sad experience, and sad experience breeds good surgical judgment." If in doubt, or if you cannot get the wound properly cleaned up, leave it open and line the sides with thin vaseline gauze strips so that there will be a free and easy exit for the exudates that will form.
4. Remove the tourniquet and clamp and tie the bleeders. Hemostasis must be complete, particularly if closure is anticipated. Remember that catgut is foreign material, so do not be too generous with it in ligating bleeders.
5. If internal fixation is not indicated, align the bone and apply an appropriate form of immobilization, skeletal traction or casts. If the latter, cut adequate windows in the casts to provide for subsequent observation of the wound and dressings.

Postoperative Care. In addition to the usual supportive measures, relative to diet, fluids, relief of pain, and perhaps additional blood transfusions, administer 1,500 units of mixed antitetanus serum after skin testing the patient for sensitivity. In major and severe wounds, repeat this procedure within a week. If the patient has previously been immunized, a booster dose of toxoid may be sufficient. Antitetanus serum or toxoid rarely fails to provide adequate coverage but antigas gangrene serum probably provides little or no protection; it merely delays the onset of the gas gangrene. (For medicolegal reasons give it anyway.) Be generous in your administration of antibiotics, using penicillin and perhaps one of the other antibiotics boldly and consistently, thereby providing adequate coverage for a mixed bacterial flora.

Local Care. Bivalve the cast, to allow for swelling and elevate the injured extremity. Request observations of the exposed parts for any indication of circulatory embarrassment. Inspect the wound frequently during the first two or three days, watching especially for evidence of gas gangrene as well as ordinary pyogenic infection. Usually after a week, subsequent treatment centers around the treatment of the fracture as if it had been a closed one rather than a compound fracture. If infection occurs, the ensuing course is likely to be a long and arduous one.

In Summary: The salient features of the management of major wounds can be simply stated. The emergency treatment of shock or impending shock is paramount and should prevail. The five senses and the sphygmomanometer should alert one to incipient dangers. The efficacy of morphine, whole blood and blood substitutes, antibiotics, adequate splintage, gentle handling and safe transport are not minor details. A tourniquet is oftentime a deadly instrument; use it as a last resort. Definitive treatment of the injured extremity can be carried out only when the patient's general condition permits. An accurate appraisal of trauma in general, and wound damage in particular is a facility that must be acquired to save life and restore a functional limb.

Malignant Tumors Involving the Vulva, Collins, C. G., M.D., Collins, J. H., M.D., Nelson, E. W., M.D., Smith, R. C., M.D., and MacCallum, E. A., M.D., Am. J. Obst. & Gynec., 62:1198, 1951.

The authors arrived at the following conclusions: Venereal granulomatous lesions seem to be a predisposing factor in the development of vulvar malignancy. If hypertrophied or hyperplastic areas persist in the vulva following cure or arrest of a granulomatous venereal lesion, a radical vulvectomy should be performed. Microscopic sections from many areas of the resected vulva should be carefully studied for the presence of malignancy. Symptomatic, atrophic or nonvenereal hypertrophic lesions of the vulva should be biopsied. If symptoms persist despite definite medical regimen, then total vulvectomy should be performed and the whole vulva submitted to the pathologist for multiple microscopic study. Lesions proved to be intraepithelial by study of multiple sections from an extirpated vulva may not require radical pelvic gland dissection. When a vulvar malignancy has been proved to be invasive by microscopic examination, radical vulvectomy and radical pelvic gland dissection are indicated. The gland dissection should extend from the lower portion of the abdominal aorta and inferior vena cava to Hunter's canal. The aortic, caval, common iliac, external iliac, hypogastric, obturator, Cloquet's, superficial and deep inguinal glands are the object of the surgical attack. If the lesion involves the bladder and/or rectum, an anterior, posterior or total evisccerectomy should be added to the surgical procedure. The advent of antibiotics, blood transfusion and modern anesthesia has allowed for a more extensive surgical attack upon malignancies of the vulva. Patient and doctor delays are still factors in defeating what otherwise might be a relatively high cure rate in vulvar malignancy. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

STAFF CONFERENCE

Departments of Obstetrics and Gynecology and Psychiatry, Vanderbilt University School of Medicine*

DR. EDWIN L. WILLIAMS: Mrs. C. A. D., a 27-year-old gravida two, para two, abortus zero, was seen on August 30, 1951, with the chief complaint of menstrual pain. Her history included a prolonged period of menstrual cramping pain with no intermenstrual pain since menarche at age of 12. Her pain had been characterized by premenstrual tension associated with abdominal distention, nausea, vomiting and at times diarrhea preceding the onset of flow by two or three days. With the onset of flow she noted severe abdominal cramping pain associated with backache, which as a rule confined her to bed during the first or second day of her period. She had used many types of patent medicines and many types of pain relieving drugs in order to relieve the pain, but to no avail. The pregnancy history included two gestations four and two years ago, and her pregnancies were uncomplicated. She had anticipated that her menstrual pain would be relieved following her deliveries but this did not occur. Since the birth of her last child two years ago she had noted considerable muco-purulent vaginal discharge. Other than the pain she had experienced in association with her menstrual periods she had been in relatively good health. She has had no major diseases, has never been confined to bed for as much as two weeks during her entire life for any type of illness, and she has had no operations.

Routine laboratory studies of the blood and urine gave results within normal limits. General physical examination disclosed no abnormality, and examination of the pelvis revealed no enlargement of any of the pelvic organs. The uterus was anterior in position, not enlarged and freely movable. There were no adnexal masses or tenderness and there was no mass detectable by rectal examination. Speculum examination of the cervix revealed a chronic cervicitis with some muco-purulent discharge. This was confirmed by a Papanicolaou smear. It was then felt that this patient had primary or essential dysmenorrhea.

Therapeutically, she was instructed with regard to the menstrual phenomenon and a brief discussion was carried out with her concerning the physiology of menstruation in terms which she could easily understand. She was advised of the fact that her pelvis was normal, that there was no inflammatory process of significance in her pelvis, that she had no tumors, and that she had well developed, normal, mature genitalia. She was advised that relief from pain could be obtained by following a program designed for the relief of menstrual cramps, and that this program should be carried out with each period, also that it would be advisable to initiate the program to relieve pain prior to the onset of flow. She was instructed in three principles concerning the relief of her pain. The first involved exercises, flexion and backstretching exercises which were to be begun five days prior to the onset of flow. The exercise suggested was one which consisted of placing a deck of cards on a shelf as high as she could reach and having her take one card at a time, alternating the hands that she used to reach the cards, holding her knees as straight as possible, bending over and placing the card by the opposite foot. By using the entire deck of cards it made her bend 50 times. She was to use the exercise morning and night, making the daily exercise 100 times. She was also advised to restrict her salt intake during the time five days prior to the onset of flow and was given a sodium-poor diet. She was advised to increase her activities at the time of the onset of the period rather than to decrease her activities which she had formerly practiced. She was advised to increase the amount of exercises, if possible, to three times a day at the time of onset of the flow. In association with the exercises and the salt-poor diet she was given a prescription for a smooth muscle antispasmodic, Pavatrine. Four grains of Pavatrine were taken three times a day, beginning five days before the onset of flow. She was instructed to call and report her progress, if any, at the time of her next period. No treatment of the chronically infected cervix was carried out at the initial visit. That was deferred until a later date.

The next contact we had with the patient was during the next menstrual period, at which time she reported very little pain during her period and that as long as her "road work" was done, as she termed her exercises, she felt relieved. Until the present time she has had four periods since the initial examination and instruction in the office, and since that time has been relatively comfortable. She has not been in bed during the periods and has been able to carry out her household duties during menstruation as at other times.

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*From the Department of Obstetrics and Gynecology and the Department of Psychiatry, Vanderbilt University School of Medicine, and Vanderbilt University Hospital, Nashville, Tenn.

DR. JOHN C. BURCH: This is a very interesting case that Dr. Williams has given us. Dr. Orr will continue the discussion.

DR. WILLIAM F. ORR: Dr. Williams and I went to see this patient at her home. To understand her better it might be well to describe a little of her and her home, which I think tells a good deal about her. She lives in a modest house in a pleasant section of town, a well kept little house. When walking into the living room one is struck by two objects which are seen there—two enormous imitation ebony lamps carved in the shape of Ethiopian servants bowing before you—any bordello would be proud to have them. This was entirely out of keeping with the rest of this modest house.

She was a rather pretty, petite girl, certainly not beautiful, active and attractive. She sat down and started telling her life story immediately with no embarrassment and without hesitation. It is interesting that this girl whose house is so ornamented was a peasant girl from Lorraine. She was born to a peasant family and grew up in a small village. She was the seventh, I believe, of 12 children; she had older sisters and older brothers, as well as younger sisters and brothers. Her father she described as a person who was cruel and she didn't care much for him. He had been previously married and had seven or eight children by this marriage. He was not a person of great substance. Her mother's family were the people whom she admired. They had a farm out from town with goats and sheep on it. Her chief pleasure as a child was going out to this farm and working there. Though there was this large number of children, it was surprising to find out that she had no preparation for menstruation, neither from her mother or older sisters. When menarche occurred at age 12, by odd coincidence on Easter Day, she was totally unprepared for it. She began cramping in church, had to come home, went to bed, and still nothing was explained, other than an older sister instructed her in wearing a menstrual pad. Her mother never explained any of the facts to her.

The children were so separated from the parents that they were never allowed to go into the parents' room at all. She tells of an episode some two or three years later, at which time her mother had a miscarriage. She had never been in her mother's room before while her mother was in it. She came in to find her mother lying in a "pool of blood," and after she assisted her mother to the bed she was told to leave the room and shut the door, and she was not allowed to re-enter. She remembers that after this a little casket was taken out of the house; though she was 14 years old at the time, she was not informed of what occurred, and it was only in retrospect that she understood. She went to the parochial schools, apparently did well and later was sent to a convent. During the time she was at the convent her menstrual periods continued to be extremely painful. At each period she would stay in the dormitory by herself. No one would speak to her of the problem. No one would give her any advice. No doctor was allowed to be called. There was one maid who would come up occasionally and bring her a cup of hot tea. This was the only attention she received. Is it any wonder that she felt menstruation was shameful?

During the menstrual difficulties she went through the convent, learned to type and to take shorthand, and at the time the war broke out her family was displaced, as they lived with the "Maginot line in their back yard." She returned later to the town and began work for the French government. Through machinations on her part she was transferred to this country—her great goal and aim, and after arriving she was married. It is apparent that she has things which she has never had and never known before in her life, and is immensely pleased with America and delighted with everything about it. I think this last factor is important because of the marked difference to her former life. The affluence she now has is something which is entirely new to her and I think important to the treatment of this patient.

She was given a Rorschach test, which was interrupted "blindly"—that is, on the test alone without knowledge of the patient's symptoms. It shows a restricted young woman, a person who is quite inflexible with few resources for dealing with problems. Yet, at the same time she has a very strong and very well knit together personality structure. There is no evidence of serious mental illness. She has few ways of handling her inner feelings, no method of discharging her tensions really, as shown by the Rorschach test. On card 6 with the phallic top, she says, "O yi yi, another of these queer things!" On every card there is at least one response which has pelvic bones or the pelvis in it. Another one that she sees is a terrifying green monster. These are the things which her fantasies run to.

In talking with her I asked her why did she feel that she was so much better—what had it been that had caused her marked improvement? She said without hesitation, "It's the exercises." I said, "Do you feel that there could be any other aspect to this but the exercises?" She said, "No, it's the exercises. I like to dance and when I know it is time for my menstrual period I not only start doing the exercises, but I dance all around the room and that is what has helped me get well."

DR. BURCH: Thank you, Dr. Orr. I think you have given us a marvelous insight into this problem that most of us need to know more about. Dr. Williams, will you continue the clinical discussion?

DR. EDWIN L. WILLIAMS: Dysmenorrhea is conveniently divided into two parts, so-called secondary dysmenorrhea or acquired dysmenorrhea which constitutes the minority of difficulties which arise in association with menstruation, and the more common type of dysmenorrhea or cramping with periods which is called primary or essential dysmenorrhea. This provides the majority of complaints with regard to menstrual pain. These two types of dysmenorrhea usually can be suspected, at least, and differentiated on the basis of the history. In acquired or secondary dysmenorrhea the history is usually that of a woman who has menstruated with relatively little difficulty for a period of time and has gradually started having pain in association with the periods. The pain in acquired dysmenorrhea is frequently pain which increases as the flow and the period proceed, being much worse toward the end of the period than it is at the onset. It is also dysmenorrhea which increases gradually as the periods occur, being worse this month, for example, than it was three or four months ago. It is frequently associated with some pain between periods, and on careful investigation of the pelvis in acquired dysmenorrhea one will find a disease of the pelvis which may account for the pain. Endometriosis is one of the chief offenders and causes menstrual pain which is of the acquired type. Pelvic inflammatory disease also produces acquired dysmenorrhea; submucous myomas and other tumors in the pelvis will at times produce pain. These cases represent the minority of individuals, however, who have cramping with their periods. The more common type of dysmenorrhea is the simple cramping pain with the periods which has been present since the onset of menstruation, which is usually approximately the same type of syndrome that exists throughout menstrual life. It is often associated with premenstrual tension which may be manifest by abdominal distention, headaches, diarrhea, nervousness prior to the onset of the period, irritability, inability to sleep, inability to tolerate noises and a distinct feeling of swelling, which at times is most noticeable in the breast with pain of the nipples. At the time of the onset of the period in primary dysmenorrhea there is usually lower abdominal cramping pain which is laborlike, being referred to the back as labor pains are referred to the back, with a lower abdominal ache. This type of dysmenorrhea, the type which this patient in question today demonstrated, is best relieved by approaching it from a physiologic basis. The abdominal distention and swelling is not an emotional tension or an imagined tension, but actually is a tension which frequently is due to fluid retention. This patient stated that she had a great desire for salt and salt-containing foods and enjoyed foods which were high in sodium content.

Many times patients who have severe primary dysmenorrhea and a great deal of premenstrual tension will gain as much as 3 to 8 pounds prior to the onset of flow, which is due to fluid retention in association with the hormonal regulation of menstruation. The restriction of salt and sodium-containing foods and fluids prior to the onset of the period will at times relieve to a marked degree the amount of premenstrual tension. The lower abdominal cramping pain is due to uterine activity which, as demonstrated by the tocograph, gives a pattern rather characteristic of the individual who has menstrual pain. There are two characteristics of the pattern which occurs in primary dysmenorrhea. In the first place, the uterus maintains an abnormal tone so that the base line of muscular activity in the uterus is increased over and above what is usually found. Superimposed on an increased fundamental tone of the uterus there are waves of contraction, a uterine activity which simulates labor contractions, much higher than in the individual who has menstruation without a great deal of pain. This produces pain which is referred as in labor to the back, thus accounting for the backache. In the treatment of primary dysmenorrhea there are a few principles which are of help as far as the instruction of the patient is concerned. In the first place, to relieve the pain a program must be instituted which will reduce the amount of sodium during the week prior to the onset of the period. Secondly, the blood will drain easier from the uterus and with less cramping if the patient is more active. I suspect that the decentralization of the patient's attention from the pelvis by means of the flexion exercises and the demonstration that this is a general problem rather than a local pelvic disease accounts for as much of the relief that occurs in dysmenorrhea as the actual drainage which is increased by the exercises. Thirdly, it is of some importance to administer some type of antispasmodic which will relieve the fundamental uterine tone of the uterus to some degree and also decrease the amplitude of the contractions. It is of importance that patients be told that their pelves are normal and that they are not suffering from some pelvic disease which is causing pain with the periods.

DR. BURCH: Dr. Orr, will you tell us a little more about the psychiatric interpretation?

DR. ORR: I would like to start off by agreeing very heartily with Dr. Williams in this situation—that this is a physiological condition and not a hysterical phenomenon. This is not imagined pain, but is the pain caused by the abnormal function of the body. It is the body using the body organs as a method of expressing the emotional problems which lie within the individual. It is interesting that these individuals who utilize their body organs as methods of expressing their emotional problems can be categorized in a broad sense. Their attitudes and ways of dealing with life are very much the same, and I would like to point out a few of the methods they use before taking up the problem of dysmenorrhea. We find that people who have "psychosomatic disease," of which I think primary dysmenorrhea is one, are of this kind; they conform very strongly to the social pressures put on them. They are people who are accepted in society and who conform—they are rarely odd or queer people. They are people who are friendly and outgoing, people who are well thought of and whose life goal seems to be directed towards being well liked. Yet, at the same time they are people who are ambitious. They want to get ahead and are not satisfied with just being like everybody else, but want to be someone who is successful. Trying to be liked by everyone and at the same time being ambitious is a neat tightrope to walk. They can't "blow up" and get angry as you and I, shall we say. They can't "cuss somebody out," because of their drive to be liked and to be well thought of. There has to be some method whereby this discharge can take place and the discharge does take place through the autonomic nervous system or through the humoral mechanism generally.

We can see that this ambitious girl, whose mother was certainly fertile, in whom the bearing of children and living close to the farm—to life—was an important function for her, and yet knowledge of sexual life and sexual function was entirely kept away from her. She was not even permitted, as you recall, to go into her mother's bedroom. She was not told of menstrual function and all expressions of sexual life were suppressed in her childhood. We can see, for instance, her great interest in the pelvic function, because on Rorschach test, in each ink blot which can look like anything and most people find that they do, she found pelvic anatomy, so that her life centering is on the pelvis and the thinking of pelvic function. We further see that here is a girl who is still conforming and who has come to this country and is trying to be like everybody else in this country, in her way. The gaudy decorations this simple peasant girl now uses show that attempts to conform are still going on. I might add that I never saw as many victrola records in my whole life as were in her room. One whole side of the room was filled with albums of records of the highest order. So that all the way through she is trying to express her social ambitions, as it were, through these means. Then we see that with her inherently rigid personality she has little way to express the problems relating to sexual life except through the bodily functions—through sickness she can express them and only through it.

I would like to comment a little further about Dr. Williams' method of treatment in this patient. How should this woman, in whom the chief difficulty is emotional rather than pelvic, be treated? Should she have been treated by a psychiatrist, or should she have been treated by a gynecologist? I don't think there is any question about the answer to that. She has to be treated by the gynecologist, because she went to the gynecologist and he is her doctor and therefore he treats her. What does he treat? Does he go back and go through the intricacies of her life and the feelings she had as a peasant in Lorraine, which he can know nothing about because he never experienced it himself? Does he go through the feeling she has—the resentments she probably feels toward her father, the fears about the abortion which her mother had when she was 14? Does he talk to her about the life in the convent when she lay cramping and vomiting in the dormitory, cold and afraid? No, I don't think so. She is too rigid, too restricted to really be able to utilize these experiences in her life. But what she is going to be able to utilize is a person who is strong, who can talk to her frankly about her pelvic function, something that's never occurred to her before. Menstruation has always been something which is shameful, bad and terrible and here for the first time an interested doctor in this big new country she has come to helps her. She can talk about this without shame and without difficulty and, therefore, by talking about it, it becomes less shameful to her. By giving her something to do which de-emphasizes her pelvis (the body exercises), in addition to the physiological effects which this had, they had a profound emotional effect on her. In this way the methods which Dr. Williams used are best for use in patients like this, and surely the gynecologist or the general practitioner is the logical person to treat this problem.

DR. BURCH: Thank you, Dr. Orr. This has been a most interesting discussion and I think a most fundamental one. The management of cases of this kind, not alone of dysmenorrhea, but of all functional conditions, is a daily problem to us all. Now, the successful management of these cases can be pretty well formalized. Dr. Williams has done this in the management of this case which he has so successfully treated. Let's see if we can put down what's been done. First, he demonstrated to the patient his interest in her as a professional problem and as a person. The second thing he did was to make a good examination. On the basis of that thorough examination he has given her an explanation, reassurance and support. Now, those things are of no value unless they are preceded by the demonstration of interest in the patient. Lastly, he has given an active program of treatment. It was successful as it is in most of these conditions.

DR. DIXON N. BURNS: I would like to ask a question about the prescription of medication. Do you think that at times it might be inadvisable, if the patient is of the type who might become more dependent upon the drug? Do you think that sometimes it's better not to prescribe it for certain individuals?

DR. EDWIN L. WILLIAMS: I feel that it is satisfactory and effective to give some kind of antispasmodic to patients with dysmenorrhea if the function of the drug is explained to them. I don't feel that any type of sedative drug is indicated and I don't use antispasmodics which have combined within the tablet a sedative.

DR. ORR: I asked this woman how much did she feel the medicine has helped her and her answer was, she thought, it had helped her a "little bit," and I don't believe she is taking it any longer. The exercises are the main thing she relies on. I believe that answers your question, Dr. Burns. The medicine has not been very important in this patient. The second: What are doctors going to do about giving medicine to patients like this, when they feel that the medication itself is of little importance? If a person who is restricted and whose idea of a doctor is someone who comes to give medicine, receives no medication, naturally feels that she is really not being treated. Therefore the doctor has no other way of showing his interest and affection for the patient, if you want to call it that, except by giving her medicine. Thus, it would be wrong, psychologically, for the patients not to be given medicine, not for its magical quality, but because of the cementing of the relationship which occurs between the doctor and the patient.

DR. G. SYDNEY McCLELLAN: In the event the gynecologist is unable to manage dysmenorrhea, is it advisable to refer such patients to a psychiatrist?

DR. ORR: I think there are many people in whom the painful menstrual periods are intertwined so intricately with their many, many emotional problems; in such a case the dysmenorrhea is secondary to the emotional problems and then they are a psychiatric rather than a gynecological patient. But a patient in whom dysmenorrhea is the chief complaint, I believe that is a problem for the gynecologist until proved otherwise.

DR. CLAIBORNE WILLIAMS: I would like to ask what is the possibility of this patient remaining relatively free from dysmenorrhea. Will she require continued support, or is it probable that she will continue comfortable without further assistance from a physician?

DR. EDWIN L. WILLIAMS: This patient has chronic cervicitis which should give us an opportunity to see her in the future. With no indication for cauterization of her cervix, and had she not had some minor pelvic disturbance which warranted investigation in the future she, of course, would not have been dismissed. She would have been seen again in about 6 months for a routine physical examination and checkup. That would give us an opportunity to re-emphasize to her the state of her health and the state of her normal pelvis.

DR. ORR: Concerning this patient, I would say that it is in the lap of the gods as to how well she is going to be. Here is a person who is, as it were, being reborn in this country. She is beginning a new life, and how well she is able to integrate herself in this life depends on how successful she is going to be from a physical as well as an emotional standpoint. If she is able to make a successful life and is able to express herself, I think she may remain well. If, however, problems arise through competition, as they well may, she is going to have some kind of somatic expression of these, possibly not dysmenorrhea but something else, hypertension, if you will.

DR. RICHARD C. STUNTZ: Would you ever consider performing a presacral neurectomy on such patients?

DR. EDWIN L. WILLIAMS: At the present time there is less interest in presacral neurectomy than there was 5 or 10 years ago and, as far as I know, the majority of patients who are subjected to presacral neurectomy at the present time are patients who have acquired dysmenorrhea. Here the operation is done in association with conservative pelvic surgery for endometriosis or pelvic inflammatory disease, rather than for primary dysmenorrhea.

DR. BURCH: There is a very interesting discussion on that point in the 1951 Year Book of Obstetrics and Gynecology. The cure rate is about 70 percent, although Cotte, who has done 1,500 presacral neurectomies, reports an even higher incidence of pain relief. One of the comments that was made in that discussion was that the operation seemed to be meddlesome surgery in a number of patients. During the last week I have seen two cases who have been relieved by this procedure. I think the operation has a role, but it should be reserved for cases which have been very carefully screened.

DR. ORR: I would think that primary dysmenorrhea in an occasional patient would require some operative interference. At times personalities are so rigid that no amount of understanding care can change their attitudes, in which case the patients either become addicts or are completely disabled by their symptoms. The relief of pain through surgery is justified, though as far as the personality is concerned is palliative rather than curative.

The Use of Vitamin B_{12} in the Management of the Neurlogic Manifestations of Diabetes Mellitus, with Notes on the Administration of Massive Doses, Sancetta, S. M., Ayres, P. R., and Scott, R. W., Ann. Int. Med., 35:1028, 1951.

The authors have presented in this article a very complete and thorough study with extensive observations on diabetic patients with neurologic disturbances for which no cause, other than diabetes, could be found. All the diabetics exhibited objective findings, with part of the group having been observed as long as seven years. All patients were thoroughly investigated with studies including gastric analysis, spinal fluid examination and protein studies. Patients were initially studied in the hospital and followed in the clinic at least once weekly while therapy was being given. The material employed was crystalline vitamin B_{12} administered intra-muscularly or subcutaneously. Varying concentrations of B_{12} from 15γ-1000γ per cc. were employed.

Although several of the patients under observation demonstrated findings often associated with the diabetic state, none of these conditions, other than the neurologic manifestations, were affected by vitamin B_{12} administration. It was felt by the observers that the improvement these patients obtained was neither psychic nor on a vascular basis but due to the action of B_{12} on the deranged intrinsic nerve metabolism. In conclusion the studies seemed to indicate that of the twelve patients under observation, there was improvement, from partial to complete remission, in all but two of the cases. It was also felt that the variability of response was determined by the extent of vascular damage as well as by the reversibility of injury to the nerve cells. The dosage was recommended to be 15γ to 30γ daily for seven to fourteen days followed by a maintenance dose once or twice weekly. The frequency of administration apparently was more important than the amount of each dose in obtaining a remission. (Abstracted for the Tennessee Diabetes Association by Cleo W. Stevenson, M.D., Memphis, Tenn.)

The President's Page

SEE YOU IN KNOXVILLE

Dr. Kelly

The Tennessee State Medical Association will hold its 117th Annual Session at the Andrew Johnson Hotel in Knoxville on the 7th, 8th and 9th of April. Let me urge you to attend and make this meeting the best we have ever had.

The Tennessee State Medical Association has made some great strides in the past few years. It is now in a position to wield considerable influence in the community. The trend of that influence will depend upon you and me. If we don't attend the meetings, we lose the opportunity to help steer that influence in the right direction.

Your program committee has worked diligently to get some outstanding speakers on the program, and the program as a whole is going to be second to none. Come out and hear these men, and carry back to your community the latest trend of medical thought. The caliber of men we can get on the program depends upon the attendance at the meetings. If we hope to continue to attract outstanding men, we must attend the meetings.

There is another good reason for attending your State Meeting. There is no place you can go, no meeting you can attend, where you would see so many of your friends. Then again, it is your meeting; yours to mold and support, or yours to let wither and die.

Someone has said that the individual who neglects to exercise his right to vote has no right to complain about the type of government that governs him. So it may be said here that the man who does not attend and support his State Association has no right to complain or criticize. It's your Society—let's support it, and make it the type of Society of which you can be justly proud.

It is a pleasure for me to announce that my special guest speaker for the "President's Night" program on the evening of April 8th will be Dr. Louis H. Bauer, of Hempstead, New York, President-Elect of the American Medical Association. The president of our Association each year has the privilege of inviting a guest speaker.

Dr. Bauer feels very strongly about the obligation of physicians to support and participate in the activities of their county, state and national associations. Here is a significant quotation from a recent address by Dr. Bauer at the Los Angeles Convention of the American Medical Association:

"Just what do we mean by 'working together '52'?

"First, we must unify the members of the medical profession. We must overcome indifference of some members and revitalize societies with poor attendance. Physicians must realize that medical progress will cease unless doctors learn to work together. Wherever in the world the medical profession has not stood together as a unit, it has been taken over by politicians."

See you in Knoxville!

Ernest G. Kelly

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Henry B. Gotten, M.D.
Malcolm T. Tipton, M.D.
Harwell Wilson, M.D.
Helen Johnston, M.D.
R. C. Kimbrough, Jr., M.D.
Cooper McCall, M.D.
Charles P. Wofford, M.D.
Addison Scoville, Jr., M.D.
James Loveless, M.D.

FEBRUARY, 1952

EDITORIAL

COLLECTION OF ITEMS OF MEDICAL HISTORICAL INTEREST

Probably each year there are lost personal records of physicians who have practiced medicine in past years in Tennessee—records which might be of historical interest. Younger generations have less interest in great-grandfather's account books and the like, and so these go into the discard.

Your editor proposed to the Board of Trustees of the Association that the office of the Executive Secretary be a repository of any items which might be of interest in the medical history of Tennessee. It was agreed that this should be done. This is then an appeal to all members for such material. If among your patients there are some whose father, grandfather or great-grandfather was a physician, ask them not to destroy any personal records which may be extant without giving you an opportunity to see them. These may be,—(1) diaries, (2) account or charge books (these illustrate the type of cases seen from day to day), (3) unpublished papers read before organizations, and (4) letters descriptive of practice or scientific content. The Association is not interested in old medical books or bound journals. (Anything of interest in this field should be offered to the libraries of the medical colleges of the University of Tennessee or Vanderbilt University.)

No history of medicine in Tennessee as such has been written. (Some material of this kind was included in the Centennial History of the Association.*) The collection of material, as indicated, in the archives of the Association may one day offer much of the source material for such a history.

R. H. K.

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THE UNIVERSAL REACTION IN HEALTH AND DISEASE

In the last several years Kahn* has described the universal reaction, and has indicated that this lipid antigen-antibody reactivity may make a contribution in immunity as related to health and disease. He points out that the serologic response which follows a definite pattern in health, changes in disease and upon recovery reverts to normal. He also has learned that the injection of substances of various types and irradiation may for the time being alter the normal pattern.

The universal reaction studied by Kahn consists of precipitation reactions with a lipid antigen,—the Kahn antigen suspension. This universal reaction, found in all human beings and animals, differs from the Kahn sero-diagnostic test for syphilis in the method of employing the antigen. The test involves seven quantitative setups,—viz., distilled water 0.15, 0.6, 0.9, 1.2, 1.8, 2.1 percent NaCl solution. Various dilutions of these are set up, readings being taken after placement in an icebox at 5° C. Readings of precipitation in the various dilutions of the seven concentrations as 2, 3 and

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*Hamer, P. M., Centennial History of the Tennessee State Medical Association, 1930.

*Kahn, R. L.: Serology with Lipid Antigen, Baltimore, Williams and Wilkins Co., 1950, and Present Status of Universal Reaction in Health and Disease, Univ. Mich Med. Bull., 17:217, 1951.

4-plus are plotted on ordinate and abscissa respectively, providing a graphic pattern.

The universal reactions are quite consistent,—in the Michigan area 85 percent fall into the low degree of precipitation, 10 percent into the moderate and 5 percent into the relatively marked. Of greatest interest is the constancy of the pattern for a given person or animal month after month. In those giving false positive tests for syphilis, the universal reactions are unusually marked. There is no great difference in the universal reactions as related to race though the American Indian reacts more strongly.

The universal reaction is related to lipids apparently, and may thus represent a union of natural antibodies to lipids. If so, they may be related to lipids released by normal catabolism and thus be constant, and so the universal pattern in health is constant. So far abnormalities of the universal reaction have been consistent in syphilis, yaws, leprosy, tuberculosis, malaria and by the use of a special lipid antigen,—in cancer. The precipitation decreases with improvement in disease. It has been shown, furthermore, that irradiation of normal animals alters the universal reaction characteristic of an individual rabbit. Also it appears that irradiation will alter the universal reaction pattern of the cancer patient if improvement occurs; the same seems to be true in the polycythemic patient irradiated by radioactive phosphorus. The injection of antigenic (horse serum) and non-antigenic (paraffine oil) substances into rabbits will change the universal reaction pattern of the individual rabbit.

Though in the past it was accepted that lipid antigen-antibody reactivity was associated only with syphilis, it now seems that the characteristic pattern in the universal reaction in syphilis is due to interaction of special antibodies with homologous lipids in the antigen,—i.e., it is specific for particular lipids found in syphilis. The Kahn antigen probably contains many lipids which may be homologous to certain antibodies. Kahn speculates that as a result of tissue break-down lipids are liberated which, changing chemically, become foreign to the body and thus antigens stimulating antibody formation, which are revealed in the pattern of the universal reaction.

These interesting studies offer a broad field for speculation. If it could be shown that a given person has a universal reaction of an especial pattern varying little from month to month, might an alteration of the pattern offer a means of giving assistance in early diagnosis of a chronic disease? This must await much more study and experience.

R. H. K.

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TRENDS IN MEDICAL EDUCATION

It has often been said that given enough time one may expect pendulum-like swings in human activities and endeavors. To some extent this is shown in certain of the recent trends in medical education,—a move to recapture some of the experiences and viewpoints of those who learned medicine under a preceptorship. The changes being made or contemplated in the last several years became subjects for discussion among medical educators a decade and more ago. World War II and its dislocations of normal patterns of life postponed a trial of curricular changes in medical education. With the ending of the war a number of schools entered upon experiments in teaching. Some schools have had an experience now of several years in these alterations in the curriculum.

Within our memory we have known physicians who "learned" medicine on a preceptorship basis. With increasing numbers of medical schools in the latter half of the nineteenth century the preceptorship type of training faded, and medicine was taught by the didactic method of lectures and demonstrations. By the turn of the century certain of the schools of the country were using the German system of bedside teaching and clinical clerkships whereby the student took histories from, and examined the ill patient. This practice became the universal method of teaching with the elimination of the proprietary medical schools and the rating of medical schools by the American Medical Association in 1907, with the aid of the Carnegie Foundation after 1908.

With the advances in bacteriology, hematology, radiology, electrocardiography and biochemistry during the 'teens and twenties the laboratory began to assume an importance that in many ways overshadowed the wards next door. In the hands of many teachers, especially the younger ones, the interest in a given case was primarily in the disease and the patient as a *person* was relegated to a secondary role.

Medical science made great strides but by the late thirties some medical educators began to point up the dangers and disadvantages of forgetting the patient as an individual and urged a change in viewpoint. Psychiatry had come of age between the end of World War I and the late thirties and was interested in psychodynamics and psychologic reactions to disease in the normal or near normal, even more than in the psychoses. This involved evaluations not measured in QRS complexes, X-ray films, millequivalents or in numbers of one type or another. As a natural result, after the hiatus of World War II, the forward looking educators began to put into effect experiments in curriculum which would permit the future doctor to again consider the patient as a human being who is ill, and all that this entails, rather than a patient as a living organism who is a carrier of interesting pathology. The relative ease of management of that large segment of practice in past years, the infectious diseases, has focused increasing attention upon the psychosomatic and degenerative diseases with their attendant personality and adjustment problems.

By now quite a number of schools have been experimenting, or are planning to do so, with a number of curricular changes to place emphasis on the patient as an ill person first, and the interpretation of disease in this light. These have taken various forms. Some schools have introduced first year students to contact with families of patients in an effort to get them to learn background, in terms of homes from which patients come,—acquainting them with the social and economic factors in illness. The integration of second year courses, such courses as physical diagnosis, clinical pathology and the like, teaching the student what can be done in examination of patients, is carried out in other medical colleges. In other places, students during the clinical clerkships on the wards follow the patient to the home, after discharge, for follow-up observations. The fourth year program is being experimented with most drastically. In some places general practice clinics staffed by general practitioners are being set up. In others students leave the school for 1 to 3 month preceptorships with selected general practitioners. In still others the departmental lines are broken down in the outpatient services, the student following patients with varied conditions and diseases for a year,—the student's patient, so to speak, giving him the opportunity to accompany his patient to consulting clinics, for special examinations, to the operating room and to the home. Some of these changes are being made in the medical schools in Tennessee.

Some who are used to the teaching methods of the past forty years may not approve of these experiments, but if medicine is a living and changing applied science, its teaching by the same token should not be irrevocably fixed. The profession should await the results of these experiments with an open and interested mind.

R. H. K.

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MEDICAL FEES SET IN WAGE STABILIZATION DIRECTIVE

It comes as a shock when one awakens to the fact that his freedom of action has been limited by directive. In this era of bureaucracy we of a profession may be forced to develop a philosophic resignation. Our acquaintances and friends in the business world tell us that members of the legal, dental and medical professions have been fortunate in having been relatively untouched by bureaucratic regulation.

In December, 1951, the Wage Stabilization Board* issued regulations concerning health and welfare plans. Under this control all new or modified health and welfare plans must be referred to the Health and Welfare Committee. (Any plans in effect as of January 1, 1951, or approved subsequently may be reviewed.) These matters are considered to be forms of "employee compensation" and therefore subject to regulation.

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*General Wage Regulation No. 19, under authority of the Defense Production Act of 1950.

Resolution No. 78 sets up the criteria to be used by the Health and Welfare Committee in passing upon any new or modified plans. Any new or modified plan must be reported by the employer or those organizing "a plan," such as the Tennessee Plan, to the Wage Stabilization Board. If it conforms to the criteria, the plan automatically goes into effect after a 30 day period of waiting. Any plan out of line from the criteria must be approved by the Committee.

No proposed health plan will meet the criteria if under *surgical expense* the "fee schedule (provides) a maximum allowance in excess of the appropriate Veterans Administration, prepayment surgical plan, or standard $200 commercial insurance fee schedule"; or if the "fee schedule (provides) . . . any unusual allowances for specific procedures, e.g., a fee for tonsillectomies which exceeds by a significant amount the corresponding fee in an appropriate Veterans Administration, prepayment surgical plan or standard $200 commercial insurance fee schedule"; or provides for "any unusual type of benefit, e.g., dental, plastic surgery for cosmetic or beautifying purposes, major surgery at home or office." No plan must provide in the case of in-hospital *medical expense* for "payments in excess of $5.00 per day, or, if benefits are graduated after the first visit or the first few visits payments thereafter in excess of $4.00 per day"; nor for "reimbursement for more than 70 days during which there were visits."

To put it simply, if your Prepaid Insurance Committee wished to raise the maximum surgical fee in the Tennessee Plan above the present $200, the participating insurance companies would be unable to sell the plan to industry. If any item of the fee schedule in the Tennessee Plan deviated to any significant degree from the Veterans Administration schedule, the plan would have to be passed upon by the Health and Welfare Committee. The limits for any medical expense plan are likewise set.

At the end of 1950, 54,477,000 persons had protection against surgical expense, 21,589,000 against medical expense and 76,961,000 had hospitalization insurance. What percent of these contracts are affected by the directive is not known at the moment. The fact remains, the doctors' fees are now involved and frozen in the regulations governing the bargaining table between labor and industry, and in the involved economics of the present wage stabilization program.

R. H. K.

DEATHS

Dr. William M. McCabe, who graduated from Vanderbilt University School of Medicine in 1903, died at his home January 3, 1952. Aged 70.

Dr. Hurd Lonas Tarr, Jefferson City, a former member of this Association for many years and who had practiced medicine in his home town since 1909, died at the Baptist Hospital January 7, 1952. Aged 70.

Dr. Howard Durley, Humboldt, died at St. Mary's Hospital January 12, 1952, following an illness of three years. Aged 75.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

The Chattanooga-Hamilton County Medical Society held its annual meeting and banquet at the Chattanooga Golf and Country Club on January 10, 1952. The guest speaker was Mr. Sam McAllester, a local attorney and a former hospital administrator. The following recently elected officers were installed: Dr. Frederick Marsh, president; Dr. William Stephenson, vice-president; and Dr. Robert Demos, re-elected secretary-treasurer. The retiring president is Dr. James Hamilton.

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Washington-Carter-Unicoi County Medical Society

Dr. Hal M. Davison, chief of medicine at Georgia Baptist Hospital in Atlanta, Georgia, addressed the society at its January meeting at the Country Club in Johnson City. Dr. Davison discussed the "Teaching of Psychosomatic Principles to the Patient."

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Consolidated Medical Assembly of West Tennessee

Fifty-eight members of the Consolidated Medical Assembly of West Tennessee, the fifth largest medical society in Tennessee, composed of physicians in fourteen West Tennessee counties, attended the monthly dinner session last month at the New Southern Hotel. The scientific program consisted of papers by Dr. John Tudor and Dr. Lynnwood Herrington of Nashville. They discussed "Prostatic Surgery in the Poor Risk Patient" and "Surgical Management of Hirschsprung's Disease," respectively. Dr. Julian K. Welch of Brownsville, the new president, presided.

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Nashville Academy of Medicine

The Academy held its annual banquet and installation services at the Maxwell House last month. Officers installed at the meeting were Dr. Hollis Johnson, president; Dr. Willard O. Tirrill, president-elect; and Dr. William G. Kennon, Jr., re-elected secretary-treasurer. Dr. R. H. Kampmeier and Dr. W. O. Vaughan were elected to the Academy's Board of Directors for three year terms, succeeding Dr. C. C. Trabue IV and Dr. W. W. Wilkerson, Jr. Other members of the Board of Directors are Drs. James C. Gardner, R. N. Buchanan, Jr., D. W. Smith, and John B. Youmans. Dr. Kampmeier, the retiring president, gave a review of the past year's progress record of the Academy, citing some of the achievements since the employment of Mr. Jack E. Ballentine as Executive Secretary and the establishment of a headquarters office for the Academy.

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Knoxville Academy of Medicine

The January 8 meeting consisted of the presidential oration by the retiring president, Dr. Joe Raulston. His subject was "Hazards in the Use of ACTH and Cortisone." His paper was beautifully supplemented by the color-sound film of the Armour Laboratories, "Therapeutic Uses of ACTH." Following the presidential oration Dr. J. B. Naive was installed as president; Dr. S. J. Platt, president-elect; Dr. Herbert L. Pope, vice-president; and Dr. Ralph H. Monger, secretary-treasurer. The meeting also included reports of all committees. One of the outstanding reports was given by Dr. C. C. Smeltzer, Chairman of the Public Service Committee. Dr. Smeltzer's Committee reported a year of unusual activity in the fields of public service and public relations.

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The January 22 meeting of the Academy was given over to routine business and a scientific program on "Retro-leutal Fibroplasia." The essayists were Doctors Jack Chesney and Robert S. Leach, with discussions by Doctors John L. Montgomery, A. L. Jenkins, and A. W. Diddle. The attractive bulletin distributed by the secretary lists all officers and committees for the new year.

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Robertson County Medical Society

The Society held its regular meeting on January 15, 1952 at the Robertson County Hospital with most of the members present. Following the dinner meeting the Society heard papers on the subjects of "Lower Colon Diseases" and "Diseases of the Genito-Urinary Tract of the Young Female." The Society meets on the second Tuesday of each month.

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Putnam County Medical Society

The Society has voted to do free examinations on all preschool children again this year and to do tonsillectomies on all indigent school children who need it, if agreeable with their parents.

NATIONAL NEWS

President's Commission on the Health Needs of the Nation

So that the profession may judge for itself the purpose of the Commission, the Executive Order creating it appears in full.—Editor.

In the public statement made by the President appears the following: ". . . I have asked the Commission to give its immediate attention to an evaluation of the most recent information on subjects currently pending before the Congress and requiring consideration in the next session. . . ."

Executive Order

WHEREAS our Nation's strength is directly dependent upon the health of its people; and

WHEREAS the needs of our military, defense-production, and civil defense programs for an assured and adequate supply of personnel and services present special problems in the allocation of our health resources during this emergency period; and

WHEREAS it is essential that at all times adequate provision be made to meet the health needs of the general public, including veterans; and

WHEREAS an objective appraisal of the effect of actions taken to provide for immediate and emergency needs is essential at this time in order that we may continue to meet long-term requirements for safeguarding and improving the health of the Nation:

NOW, THEREFORE, by virtue of the authority vested in me as President of the United States, it is ordered as follows:

Section 1. There is hereby established a commission to be known as the President's Commission on the Health Needs of the Nation, which shall consist of a chairman and fourteen other members to be designated by the President.

Section 2. The Commission is authorized and directed to inquire into and study the following:

(a) The current and prospective supply of physicians, dentists, nurses, hospital administrators, and allied professional workers; the adequacy of this supply in terms of the present demands for service; and the ability of educational institutions and other training facilities to provide such additional trained persons as may be required to meet prospective requirements.

(b) The present ability of local public health units to meet demands imposed by civil-defense requirements and by the needs of the general public during this mobilization period.

(c) The problems created by the shift of thousands of workers to defense-production areas requiring the relocation of doctors and other professional personnel and the establishment of additional facilities to meet health needs.

(d) The degree to which existing and planned medical facilities, such as hospitals and clinics, meet present and prospective needs for such facilities.

(e) Current research activities in the field of health and the programs needed to keep pace with new developments.

(f) The effect upon the continued maintenance of a desirable standard of civilian health of the actions taken to meet the long-range requirements of military, civil-defense, veterans', and other public-service programs for medical personnel and facilities.

(g) The adequacy of private and public programs designed to provide methods of financing medical care.

(h) The extent of Federal, State, and local-government services in the health field, and the desirable level of expenditures for such purposes taking into consideration other financial obligations of government and the expenditures for health purposes from private sources.

Section 3. The Commission shall present to the President in writing such interim reports and final report of its studies of the subjects designated in Section 2 of this order, *including its recommendations for governmental action, either legislative or administrative*, as it shall deem appropriate.

Section 4. In connection with its inquiries and studies, the Commission is authorized to hold such public hearings and to hear such witnesses as it may deem appropriate.

Section 5. All executive departments and agencies of the Federal Government are authorized and directed to cooperate with the Commission in its work and to furnish the Commission such information and assistance, not inconsistent with law, as it may require in the performance of its functions and duties; but this order shall not be construed as otherwise modifying the functions or responsibilities of any such department or agency.

Section 6. The expenditures of the Commission shall be paid out of an allotment made by the President from the appropriation entitled "Emergency Fund for the President, National Defense."

Section 7. *The Commission shall cease to exist thirty days after rendition of its final report to the President under Section 3 of this order, or one year after the date of this order, whichever shall first occur.*

HARRY S. TRUMAN

The White House, December 29, 1951.

The italics are mine. It is obvious that the Commission is not blessed with excessive modesty to undertake such a Herculean task in less than a year,—that is, if it is to be a fact-finding study made in good faith.—Editor.

(An address which commanded special attention at the recent AMA Public Relations Conference in Los Angeles is reprinted herewith for the thoughtful consideration of Tennessee physicians.) E.L.B.

Time Is Money for Your Patients, Too

STANLEY R. TRUMAN, M.D., Past President
American Academy of General Practice

Numerous public relations surveys have shown that doctors make patients wait and that patients resent being made to wait. Patients say: "I spend half of my time waiting to see the doctor." "It is easier to see the President than a doctor." "I keep my appointments with the doctor, but he doesn't seem to have any with me." "My time is just as important as the doctor's." And so on.

Smart doctors will find means of reducing the waiting to a minimum.

When a patient decides to see the doctor, he has made a decision of great importance to him. He has decided to spend time and money, and he is in a state of anxiety about his health. When the secretary or doctor by their behavior, attitude or lack of attention to the patient's time, comfort or feelings, make the patient feel his call is unimportant and his troubles insignificant, they arouse in the patient feelings of resentment and hostility toward the doctor and the medical profession.

Waiting Arouses Resentment

Patients wait, patients wait more than is necessary, and patients resent waiting. The resentment aroused is created less by the act of waiting than by the attitude and behavior of the doctor and his secretary toward the patient. Since it is rarely the doctor himself who comes in contact with the patient during his waiting period, any major improvement in this area of patient-doctor relationship must take into consideration the function and behavior of office personnel.

The secretary is the doctor's ambassador. So let's start with good secretary-patient relationships. Some doctors and secretaries automatically know how to handle patients with tact and skill. Others do not. Fortunately, these techniques can be taught, both to the doctor and to his secretary.

Here are some rules designed to create a more harmonious attitude between doctor and patient:

1. Keep the reception room comfortable, neat and clean. Attend to the physical features, which should be appropriate and dignified.
2. More important, attend to techniques of scheduling and handling of patients by office personnel.
3. Show real concern for any discomfort or inconvenience caused by patient by forcing him to wait.

Schedule Appointments Realistically

Be sure to schedule appointments. A few doctors still keep office hours from two to five and let patients drop in promiscuously. Fortunately, few doctors retain this obsolete technique. Not only should your secretary schedule appointments, but she should schedule them realistically on the basis of the actual amount of time required for various procedures.

Great attention should be paid to telephone technique. The phone should be answered promptly. The secretary should use her own name, make the patient feel he is important, and in a friendly, pleasant manner indicate when the doctor will be available. If there is to be any delay the secretary should express her concern and regret and also explain how sorry the doctor is that he is having to make the patient wait.

Explain Delays, Express Regret

When a patient arrives at the doctor's office, he should be greeted personally as soon as possible. If the patient must wait, he should be given a full, reasonable and adequate explanation. If a significant emergency occurs to make the delay excessively long, the patient should be given the opportunity of waiting or returning at a more convenient time. It is wise to give the patient the feeling that the doctor is on a humanitarian mission. If the patient has to sacrifice some of his time in the same cause, he feels a sense of belonging, of cooperating, rather than of resentment.

Patients like to have something they can take away with them. Many pamphlets are available through A.M.A. and other health organizations and agencies.

Because of the importance of secretary-patient relationships, I recommend that the A.M.A. Public Relations Department prepare an up-to-date booklet on techniques, methods and practices for handling all patient-secretary relations and duties.

MEDICAL NEWS IN TENNESSEE

MR. GEORGE D. CUMMINGS

The Committee on Postgraduate Instruction announces the appointment of Mr. George D. Cummings as the new Field Director for postgraduate study. Mr. Cummings entered upon his duties on January 1st. This was made necessary by reason of the resignation of L. W. Kibler, who for fourteen years has organized the courses in Tennessee.

Mr. Cummings is a university graduate and comes to the Committee after a similar experience in organizing educational courses for a state university. He was formerly assistant to the Executive Secretary of the Alumni Association and set up alumni groups and courses in various states. Mr. Cummings is 31 years of age, has a wife and two children, and is moving to Tennessee immediately with the assuming of his duties.

W. C. Colbert, M.D., Chairman
James M. Bethea, M.D.
Harold B. Boyd, M.D.
E. T. Brading, M.D.
Robert M. Finks, M.D.
A. M. Patterson, M.D.
Carrol C. Turner, M.D.
Bart N. White, M.D.
John B. Youmans, M.D.

Mr. L. W. Kibler, former Field Director of the Postgraduate Committee, is now head of the Department of Postgraduate Medicine of the University of Tennessee College of Medicine.

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Hospital Construction

By courtesy of the Washington Office of the American Medical Association the status of all Hill-Burton hospital construction in Tennessee as of December 31, 1951, is as follows:

Completed and in Operation: 19 projects at a total cost of $14,642,970.00, including federal contributions of $4,889,648.00 and supplying 1,020 additional beds.

Under Construction: 16 projects at a total cost of $27,834,246.00, including federal contribution of $9,365,631.00 and designed to supply 1,085 additional beds.

Approved, but Not Yet Under Construction: 10 projects at total cost of $3,909,400.00, including $2,032,784.00 federal contribution and designed to supply 289 additional beds.

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Tennessee Chapter of American College of Surgeons to Be Organized

Dr. R. L. Sanders, Memphis, announces that there will be a luncheon meeting April 7, 12:30 p.m., at the Andrew Johnson Hotel, Knoxville, for the purpose of organizing a Tennessee Chapter of the American College of Surgeons. Every surgeon in Tennessee is invited to attend. The meeting was set during the Annual Meeting of this Association for the convenience of those interested.

University of Tennessee College of Medicine

The University of Tennessee College of Medicine's new Family General Practice Clinic, an innovation in the course of study of medical schools, will receive the support of the Commonwealth Fund of New York by an award of $53,200 over a three and one-half year period. The clinic will be provided with facilities which many family physicians maintain in their own offices. Equipment will include a simple diagnostic X-ray Unit, facilities for physiotherapy, patient examining rooms and a demonstration examining room for the training of students. In addition, a social worker will be employed to work with the student on social and family factors which may have a bearing on the patient's illness. She will provide the information which family physicians in smaller communities have access to as a result of the nature of their practice.

The clinic was inaugurated last September in the Out-Patient Department of John Gaston Hospital to give senior students an opportunity to familiarize themselves with medicine as practiced by competent general practitioners. One of its purposes is to demonstrate to students that a family physician can maintain a high standard of medical service in rural areas.

The Commonwealth Fund, in a recent report, indicates it is financing a number of innovations in medical school training designed to improve the efficiency of general practice and render it more attractive to the student.

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The College of Medicine has established a Department of Postgraduate Medicine, to be headed by L. W. Kibler, for the past 15 years field director for the Postgraduate Medical Education program of the Tennessee State Medical Association. Efforts will be made to determine what the medical and dental professions want in the way of postgraduate training to improve medical service in the broadest sense. In addition to physicians, dentists, pharmacists and nurses, training will be offered to X-ray technicians, medical technologists and other auxiliary medical personnel. The University's program will be tailored to fit the needs of the busy practitioner who has been out of school several years and will utilize the facilities of Memphis' large medical center.

Dr. Hyman said: "Developments in medical science and its related fields have been so numerous within the last decade that the practitioner is hard pressed to keep up with them. The University, therefore, proposes to offer intensive short courses, of three days' to two weeks' duration, to keep members of the health sciences abreast of the developments, resulting from recent laboratory research, which can be applied to their field." The first attention will be given to the needs of physicians in general practice, but programs for specialists and members of related health fields will be included as the need warrants and facilities become available. The courses will enable the general practitioner to maintain his standing in the Academy of General Practice, which requires physicians to have 150 hours of postgraduate training every two years. Courses will be open to all practitioners, not only graduates of the University.

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There will be an increase in fees effective July 1 for students in medicine, dentistry and pharmacy at the University of Tennessee Medical Units in Memphis. This amounts to $25 per quarter for medical and dental in-state students and $18.50 for pharmacy students. Fees for non-residents of Tennessee, who must pay additional out-of-state charges, were increased at a higher rate. The new quarterly fee schedule: medicine, in-state $150, out-of-state $225; dentistry, in-state $125, out-of-state $175; pharmacy, in-state $97.50, out-of-state $125. The new fee schedule was adopted by the Executive Committee of the U. T. Board of Trustees and the University administration after a study showed that this was the only possible means of raising additional funds needed to balance the budget of the Medical Units. Dr. Brehm says: "Even with these increases, the University's fees will be less than those of most medical and dental colleges. Out-study last year showed that 57 of the 77 medical colleges and 32 of the 41 dental colleges of the nation had higher fees." He pointed out that U. T. operates its Medical Units at considerably less cost per student than many other similar institutions. U. T.'s per-student cost to train a medical student has been held to $1,043 while the national average is $2,500, he said.

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Vanderbilt University School of Medicine

Dr. Robert W. Quinn of the faculty of the Wisconsin Medical School has accepted an appointment as Professor and Head of the Department of Preventive Medicine and Public Health. Dr. Alvin E. Keller has been acting head of the department since 1948.

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Medical Mirror

From time to time this column will be devoted to quoting remarks from the public press about medicine, both favorable and unfavorable.

The best way we know to remove a barrier between interdependent groups is first to admit its existence and then to set dissipating it through increased understanding by both sides. Dr. Fred Marsh, new president of the Hamilton County Medical Society, has made a sound start on just such a process. The organization is to have a public service committee to "improve the professional relationships of the doctors with all other groups of society—patients, the general public, laborers, businessmen, the newspapers, radio and so forth."

In his inaugural talk, Dr. Marsh mentioned four specific criticisms which have been leveled against the profession. They included the matter of high fees, the aloofness of physicians from community affairs, the question of publicizing endeavors of the profession and the availability of physicians.

For too long, the medical profession—which has given mankind great and good gifts of longer, healthier lives and promises a still more hopeful future—has generally refused to admit even the presence of a growing public disquiet over medical services and costs. In part, at least, the attitude was based on a strict code of ethics which foreswore public discussion of professional affairs; in part, we believe, it resulted from a refusal to recognize the public had sufficient reason or even a valid right to evaluate professional services in terms of cost and quality.

We hope Dr. Marsh's forthright statement to his fellow physicians and his decision to form the committee reflect a modification of both these conditions. We would point out that such a program that he intends should operate as a two-way street. Not only should it endeavor to present the physician's "side" of the question in an intelligent manner, but it also must work to convey to the physician the public attitude on the very vital matter of medical care.

We are convinced the public, which pays for its medical services, has both reason and right to concern itself with what it is receiving. We are equally convinced the American public is as anxious as the medical profession to avoid socialized medicine. We believe a soundly conceived program which at once broadens the base of medical care and retains the voluntary relationship of physician and patient must come through the best thinking of both professional and lay groups. The local level is a fine place to start the cooperative effort toward a common goal.

—*Editorial, Chattanooga Daily Times, January 13, 1952.*

Dr. Marsh's inaugural address upon which the editorial was based received front page feature news position in the same newspaper.

PERSONAL NEWS

Dr. Jere L. Crook, Jackson, continues to improve following a heart attack while delivering an address last month.

Dr. Charles C. Trabue IV, Speaker of the House of Delegates of this Association, was named to the Nashville Board of Hospital Commissioners by Mayor Ben West last month.

Dr. Don Eyler, Vanderbilt Hospital surgeon, addressed a luncheon meeting of polio workers for Davidson County at their "kick-off" meeting last month.

Dr. James L. Bibb, Chattanooga, recently addressed the Sertoma Club at the Hotel Patten on the subject "Heart Disease."

Dr. Haskell Fox, Greeneville, was the guest speaker at the banquet of the Young Farmers and Homemakers Club in Greeneville recently.

Dr. R. L. Sanders, Memphis, recently became chief of the department of surgery at Baptist Hospital, succeeding Dr. M. J. Tendler.

Dr. W. T. Fitts, Jackson, was named chief of the medical staff of the Jackson-Madison

General Hospital, and **Dr. Leland Johnston** was elected assistant chief of staff.

Dr. Frank S. Lovingood was elected to a four-year term as County Health Officer for Blount County.

BOOK REVIEW

Penicillin Decade, 1941-51: Sensitizations and Toxicities, L. W. Smith, M.D., and Ann D. Walker, R.N., Washington, D. C. Arundel Press, Inc., 1951. Pages 122. Price $2.50

This small volume presents a complete bibliographic review of the reactions which have been reported to penicillin or the various vehicles in which it has been administered. The sensitizing reactions are discussed under urticaria, contact manifestations, exfoliative dermatitis, allergic reactions, ophthalmic reactions and others. Shock-like states with deaths are recorded. Toxic effects on the kidneys and central nervous system are considered. Herxheimer reactions in the syphilitic patient are described. Antibody formation to penicillin is discussed.

There is a description of newer penicillin preparations which have as their objective a lessened sensitizing tendency. Mention is made of penicillin resistant strains of organisms.

The authors emphasize that the extensive *needless* use of penicillin has sensitized many persons who may then develop harmful reactions when the *real* need for this antibiotic arises. "Antibiotics are only of value for the treatment of infections due to organisms sensitive to the specific antibiotics being employed."

R. H. K.

★

Untoward Reactions of Cortisone and ACTH, by Vincent J. Derbes, M.D., and Thomas E. Weiss, M.D., Springfield, Ill. Charles C. Thomas, 1951. 77 pages. Price $2.25.

This small volume is a Monograph in the American Lecture Series. It is an excellent, readable resume of the untoward side effects of these two potent hormones.

There is first a brief consideration of the physiology of these hormones and their interrelationship. This is followed by their effect on the other glands of internal secretion. The effect of cortisone and ACTH on electrolyte balance is given a brief space. The ill effects of ACTH and cortisone on the cardiovascular, musculoskeletal, nervous, gastrointestinal and mucocutaneous systems are treated in individual sections. A section is devoted to the undesirable effects of the hormones on infections of various types. There is an extensive bibliography.

For the doctor who has little time for extensive reading and yet uses ACTH and cortisone, this book can provide an excellent red light, and it or another of this type should be at hand.

R. H. K.

★

The Rockefeller Foundation Directory of Fellowship Awards for the Years 1917-1950.

This volume is what the title implies, a directory of all those who over the wide world have been awarded fellowships by the Rockefeller Foundation. Over 6,000 were awarded in 75 counties during these years. The amount given was $19,000,000. An additional $9,500,000 has been in grants to other organizations for their own fellowship programs. Much of this went to special training of doctors and nurses in the International Health Division. This gives but an inkling of what philanthropy under a free enterprise system can accomplish,—a fact rapidly fading into one of historical significance only.

R. H. K.

LOCATION WANTED

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

★

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself:

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

★

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

★

Surgical Residents Wanted

The Newell Hospital, Inc., Chattanooga 2, Tennessee, has immediate opening for surgical residents. The hospital is an accredited 50-bed general hospital with a large private clinic practice. The resident salary is $400 per month with maintenance. The Newell Hospital has recently become approved for one-year residency training by the Council on Hospitals of the American Medical Association. Residents can obtain approval from the American Board of Surgery and the American College of Surgeons on a preceptorship basis. Address inquiry to Dr. Edward T. Newell, Jr., c/o The Newell Hospital. The present residency is open until July 1, 1952, at which time three additional appointments will be available.

PW-3

★

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

★

The following communication has been received by this office:

"This letter is in behalf of our community's need for a good general medical doctor. We have no doctor at all in our area, which comprises a radius of 3 miles, and a growing population.

"We are situated 9 miles N.W. of Atlanta, Ga., in Cobb County, where Lockheed Aircraft is beginning the construction of the world's fastest jet bombers. There is a steadily growing need for a doctor.

"Our offer is office space, rent-free for one year, with other possible offers by our Civic Club. I will be glad to furnish more definite information to anyone interested."

PW-7

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville.

ANNOUNCEMENTS

Dr. Sam Fentress, formerly in general practice at Goodlettsville for thirty-two years, and who retired from general practice, March, 1951, due to having suffered a coronary thrombosis, accepted a position on the staff of the Davidson County Hospital where he served until December 1, 1951.

Dr. Fentress is now on the medical staff at Central State Hospital and is in charge of the male wards of this institution. Dr. Fentress is residing in one of the residences on the hospital grounds.

Dr. J. Brennan Purkall is now associated with **Dr. Joe T. Smith** at Children's Clinic in Knoxville, Tennessee, in the practice of pediatrics.

Dr. R. T. Keeton announces the formal opening of his new clinic on Highway No. 70 in Bruceton.

Dr. Howard B. Barnwell has announced the opening of an office in the Medical Arts Building in Chattanooga for the practice of plastic and reconstructive surgery.

Dr. C. E. Sappington, a graduate of the University of Tennessee College of Medicine who has recently completed his internship, has opened an office in Clinton for the practice of medicine.

Dr. E. M. Cox, a native of Henderson, has become associated with **Dr. L. P. Pearce**, a long-time Collierville physician.

Dr. Floyd Bankston, a native of Nashville, has become associated with **Dr. T. F. Booth** in Pulaski.

Dr. E. G. Lynch, a graduate of the University of Tennessee College of Medicine, has opened offices in Morristown for the practice of medicine and surgery.

Dr. T. E. Edwards, a native Tennessean who formerly practiced in Birmingham, Alabama, has joined the staff of the Medical Clinic and Hospital in McMinnville. He succeeds **Dr. Paul H. Goodman**, who has begun a residency in radiology in Dallas, Texas.

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The increasing number of reports upon commissurotomy in instances of mitral stenosis, the low mortality rate and the satisfactory outcome, force the family doctor and internist to view stenosis in a new light. They must now evaluate the patient in terms of indications and acceptability for operation.

SURGICAL TREATMENT OF MITRAL STENOSIS

WILLIAM K. SWANN, M.D., JOSEPH E. ACKER, M.D., E. CHARLES SIENKNECHT, M.D., and ROBERT B. WOOD, M.D., Knoxville, Tenn.

Introduction

Stricture of the mitral valve has now been established as a lesion amenable to surgical treatment.[1] Patients with this extremely disabling disease are now regularly being relieved and rehabilitated. The historical development of the operation is reviewed elsewhere.[2, 3] It is to be noted that the operation has been brought out of the experimental phase and into practical everyday application.

It is our impression that while rheumatic fever is somewhat less common in the southern United States than elsewhere, an observation that has been made by others, we still feel that the number of adults with mitral stenosis may be much greater than is usually believed. Laws[4] previously reported that rheumatic heart disease was found in 15.3 per cent of white persons, and in 4.3 per cent of Negroes in a group found suffering from organic heart disease and studied in Vanderbilt University Hospital in the out-patient department. Harrison,[5] in 1924, reported that rheumatic fever and rheumatic heart disease was much more common in Boston than in Richmond, Oklahoma City, New Orleans or Galveston. Comparative statistics from various sources show that the etiology of heart disease varies in different sections of the United States.[6]

Selection of Cases for Surgery

The manner in which people with mitral stenosis have come to us has in some cases been devious. It is of interest to note that three of these patients were referred because of hemoptysis of undetermined origin. This frequent and alarming spitting of blood had resulted in extensive study elsewhere, including bronchoscopy and bronchography without the correct diagnosis being suspected. The inconstancy of the mitral murmur and the ease with which it may be missed is at times responsible for this situation. We have had occasion to see patients with dyspnea and hemoptysis from the coal mining industry and have learned to do repeated and careful cardiac auscultation in searching for surgically correctable conditions.

The classification of patients with mitral stenosis into five groups according to the degree and extent of disability is useful.[1] Those we have operated upon have been in stage three for the most part. Those whom we have refused for surgery have had associated lesions such as mitral regurgitation, aortic stenosis and or regurgitation, or possible active rheumatic fever. We have not had occasion to refuse operation to any patient whose principal disabling lesion was mitral stenosis, but who was considered too poor a risk for operation.

We have had an experience similar to that of Harken[2] in that one of our most severely disabled patients refused surgery and lived less than six months after this refusal. We believe that a patient with mitral stenosis who is disabled should be operated upon. This is a simple direct statement of the operative indications, and if it has not been adopted elsewhere we feel sure that it will be. The low mortality of surgical interference elsewhere and the fact that we have obtained successful results without deaths, and without postoperative complications in our first twelve cases, lends justification to this liberal attitude toward surgical indications in mitral stenosis. We reserve the right to modify these indications if and when our surgical results become less favorable.

The elimination of patients for operation having lesions in addition to mitral stenosis has thus far been very strict and rigid. Several people have had Graham-Steele murmurs. No patient with any clinical evidence of mitral regurgitation nor with aortic disease has thus far been accepted for surgery. However, we believe that we have operated upon at least one patient with a significant degree of mitral regurgitation which was not suspected preoperatively. No patient with active rheumatic carditis has been considered a surgical candidate. Repeated sedimentation rates, leukocyte counts and clinical judgment have been used to exclude the possibility of operating on a patient with active rheumatic carditis. One patient with some degree of organic tricuspid stenosis has been successfully operated upon.

Operative Technique

The evolution of the present-day operation for mitral stenosis has been described in the literature.[2,3] Our present technique is as follows: The patient is anesthetized and intubated in the right lateral decubitus position. This maneuver is important to avoid the blood pressure changes which may result if the patient is intubated in the usual dorsal decubitus position and then turned on the side. The heart is exposed through an intercostal incision in the fourth interspace and adequate exposure is obtained by spreading the ribs without resort to division of cartilages. The long longitudinal incision in the pericardium is usually made best posterior to the phrenic nerve and silk traction sutures are placed appropriately in the edges of the pericardial incision to enhance the exposure. The Satinsky vena cava clamp is placed across the base of the auricular appendage as low as possible and closed to the first notch. We have not found any special auricular clamps to be necessary, but by varying the position and the direction of application of the Satinsky clamp have been able to adapt it to the auricular appendage in every case. A purse string suture is placed just above the jaws of the Satinsky clamp. (We first placed our purse string suture before application of the clamp but have since learned to avoid any blood loss whatsoever by first applying the clamp.) The gloved right index finger of the operator is then introduced into the appendage and as the operator opens the clamp with his left hand the assistant approximates the purse string and thereby prevents blood loss. The mitral valve is easily located and exploration carried out. It is important that the operator dictate at this time all the findings present including, first, the estimated size of the mitral orifice, presence or absence of calcification, presence or absence of a palpable regurgitant jet, whether the orifice is centrally or eccentrically located, flexibility of the leaflets, calcification in the valve, calcification in the annulus or both. If it is found that one is dealing with the type one mitral stenosis, the usual type, finger fracture of the mitral orifice is carried out, first at one commissure and then at the other, and the situation is then re-assessed. The size of the mitral orifice is re-estimated and the jet of mitral regurgitation is again evaluated. Having determined that the orifice is of a satisfactory caliber and has been increased to its practicable limits, the finger is carefully withdrawn, the clamp being closed over the tip of the finger, and then the purse string tied. It has been our custom to place a heavy silk tie below the Satinsky clamp and this is tied as the clamp is removed. If, on exploring the mitral valve it is determined that a type two stenosis is present, that is to say a funnel-like mitral valve with flexible cusps, it is probably best not to attempt finger fracture but to use one of the valvulotomes devised by Bailey or Harken. A second glove is then applied to the operative hand and the auricle is re-entered with the finger carrying the cutting instrument. It has been our custom not to carry the instrument in at the initial exploration as it is a hindrance to exploration; it will be found that most cases can be satisfactorily managed by simple finger fracture without resort to cutting instruments. (There has been blood loss in only one of our cases and this was a result of a tear in the appendage below the purse string. In this case blood loss exceeded 1,000 cc. but was promptly controlled by a lower application of the Satinsky clamp; the situation was not out of control at any time.)

Case Reports

The following two cases are presented as being representative of the group of twelve patients on whom we have operated.

Case 1. Mrs. M.L., 30-year-old married housewife and secretary. Her chief complaint was intermittant dyspnea of two and one-half years' duration. It was associated with exercise in the two months prior to examination. She had had no cough, hemoptysis, epistaxis, dysphagia, edema, nor right upper quadrant abdominal tenderness. There was no past history of rheumatic fever, although repeated sore throats had occurred in childhood. A "heart murmur" had first been noticed eight years before at the time of delivery of one of her children.

Initial examination revealed the heart to be moderately enlarged with the point of maximum intensity of the apex impulse at the sixth rib in the midclavicular line with a palpable continuous thrill over the apex; a sharp pulmonic second sound was palpable. Loud grade III diastolic and systolic murmurs were heard over the apex, loudest in the left lateral position; the pulmonic second sound was sharply accentuated. No murmur was heard over the aortic area. A third heart sound was heard at the fourth left intercostal space just to the left of the sternum but not over the apex. Rate was 106 and the rhythm was regular. There was no evidence of congestive failure. Cardiac fluoroscopy revealed enlargement of the left auricle with slight elevation of the left main stem bronchus and indentation of the esophagus. Minimal right ventricular enlargement was present.

The electrocardiogram showed broad, notched P-waves with slight prolongation of the PR-interval, primarily due to the prolongation of the P-wave. There was a definite change in the amplitude of the T-waves following exercise.

It was felt that clinically this patient fell into category II of the classification of surgical mitral stenoses.

Operation was done on December 11, 1950. Exploration of the mitral orifice revealed a fish-mouth orifice that would not admit a fingertip, its estimated size being less than 1.5 cm. The longer fused area occurred in this patient at the posteromedial commissure where an extensive linear fracture was done and a smaller fracture carried out at the lateral commissure. The estimated size after commissurotomy was 2.5 cm. or better. To secure this commissurotomy, four separate digital efforts were necessary and with each one a temporary cardiac arrest occurred which was of very brief duration. The blood loss was less than 30 cc. from the inter-cardiac portion of the procedure.

Postoperative course was uneventful except for marked mental depression on the third to fifth postoperative days; this cleared completely so that the patient was discharged on the tenth postoperative day. Immediate postoperative auscultatory changes were apparent with a marked diminution in harshness of the grade I systolic murmur, the diastolic murmur having disappeared. There was marked diminution of the pulmonic second sound. Auscultation of the heart one month after operation revealed a grade I mitral systolic murmur and a marked diminution of the pulmonic second sound, although it remained accentuated. Subjectively this patient was markedly improved with an increase in exercise tolerance. She has been able to return to her work as a secretary and in addition does her housework without dyspnea at the present time. It is now one year since operation and her clinical result is excellent at this time.

Case 2. A.B.W., a 32-year-old white male whose health was excellent with no known heart disease until 1943 when he was discharged from the army after the discovery of a heart murmur.

For three years prior to operation the patient had progressive increase in symptoms of exertional dyspnea and repeated hemoptysis. Before operation he was unable to walk on level ground more than a half block and unable to climb steps.

On examination he was a tall, slender, chronically ill, white male with a late diastolic murmur having a typical presystolic accentuation. The murmur had a slight cooing quality suggestive of calcium. In the left second and third interspace there was a high-pitched distant diastolic murmur.

At operation a markedly calcified mitral valve was found and a good fracture of both the anterolateral and posteromedial commissures was obtained. Postoperatively the patient was very tense and somewhat disoriented at times during the first three days. However, he cleared rapidly and was discharged from the hospital on the twelfth postoperative day.

It is now nine months since the patient was operated upon and he has returned to his previous occupation as a chemical operator. In addition he mows his lawn at home and has been swimming for the first time in eight years. There has been no appreciable dyspnea noted and no hemoptysis.

Summary and Conclusions

(1) Commissurotomy of the mitral valve has been accomplished in twelve consecutive cases without any mortality and with significant benefit in every case. (2) These patients have obtained a striking improvement in their exercise tolerance with great alleviation of their dyspnea. Hemoptyses have been eliminated. (3) It is concluded that the patient who is disabled as a result of mitral stenosis should have the benefit of surgical treatment if the well-known contraindications to the operation do not exist. (4) It is further concluded that commissurotomy of the mitral valve is a safe operative procedure in our hands.

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Streptomycin in Genital Tuberculosis of Female, Sered, H., Falls, F. H., and Zummo, B. P., J.A. M.A., 148:521, 1952.

Streptomycin has now been used for the treatment of tuberculosis for a period of about six years. A review of the literature fails to reveal any series of significant numbers of patients haveing gynecologic tuberculosis who were treated with streptomycin. A preliminary report on 16 cases revealed that results with this antibiotic were encouraging enough to warrant further study.

Two and one-half years' clinical experience with the use of streptomycin in 40 patients with genecologic tuberculosis is herewith reported. These patients have been divided into four groups, each with different modes of treatment. The immediate and follow-up findings are reported. Experience seems to favor a dosage of 1 Gm. of streptomycin injected intramuscularly daily. A period of eight weeks or more of preoperative streptomycin preparation improves operability and the final results. One of the most frequent but not commonly discussed complaints is the presence of a good appetite but unwillingness to eat because of postprandial pain. Decrease in postprandial pain after treatment with streptomycin permits the ingestion and better digestion of more food, which helps to improve the general condition and makes the patient a better operative risk. Nearly all patients with gynecologic tuberculosis will experience an enhanced sense of well-being early in the course of treatment. The degree and duration of improvement is determined by the amenability of the disease to the antibiotic. The most persistently good responses are noted in patients in whom therapy is instituted relatively early. As in other forms of tuberculosis, recurrences elsewhere must be anticipated. Negative smears, cultures and guinea pig inoculations of excised surgical tissue do not preclude this possibility.

Radical extirpation of diseased tissue, when feasible, is the treatment of choice. Total hysterectomy and bilateral salpingo-oophorectomy were done whenever possible. The follow-up studies on all four groups would seem to justify this procedure. Removal of pelvic tuberculous lesions, supplemented by streptomycin therapy has no beneficial influence on associated advanced pulmonary lesions. In order of frequency, the tuberculous pathologic findings were peritonitis, salpingitis, endometritis, diffuse hyperplastic adhesions, ascites, oophoritis, cervicitis, tubo-ovarian abscesses, lymphadenitis, ovarian caseation necrosis and myometritis. Six oviducts were patent and 10 were closed. There have been two deaths in 27 surgical cases, both occurring in patients with far-advanced lesions. The complications encountered during this period have been,—(a) streptomycin resistance with miliary spread, (b) tuberculoma of the brain, (c) tuberculous nephritis, (d) carcinoma of the cervix and (e) nontuberculous cystic changes in retained ovarian tissue. The persistance of a doughy abdomen has been a common finding during the follow-up interval of two and one-half years. Streptomycin is to be regarded as a most useful adjuvant to present accepted methods of therapy in gynecologic tuberculosis. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

Since the outlook in the presence of Hirschsprung's disease is so poor, the newer surgical attack is most encouraging.

THE SURGICAL MANAGEMENT OF HIRSCHSPRUNG'S DISEASE

J. LYNWOOD HERRINGTON, JR., M.D., Nashville, Tenn.

Up until recent years the surgical treatment of megacolon had in general left much to be desired. There was lacking a clear understanding of the underlying physiopathology and an accurate classification of the condition was not generally appreciated.

At the present time megacolon may be classified into three distinct types—congenital megacolon or true Hirschsprung's disease, functional megacolon and megacolon due to organic obstruction.

Types

1. *Congenital Megacolon.*—Hirschsprung is generally credited for first describing congenital megacolon in 1888, though actually the disease was recognized as a distinct entity years before his classic description. Hirschsprung did, however, observe in his two cases studied at autopsy that the patients presented an enormous dilatation of the sigmoid and proximal portion of the colon, but the rectosigmoid and rectal segments in contrast appeared normal in calibre or slightly narrowed (Fig. 1.) Unfortunately this important observation was not appreciated at the time and for the following five and one-half decades the focus of attention and all methods of treatment were directed toward the dilated portion of the colon which was thought to be the primary site of the disease. During the second and third decades of the present century the theory was held that an imbalance existed between the sympathetic and parasympathetic nerve supply to the colon, and lumbar sympathectomies and various autonomic nerve blocking agents were used in treatment with generally poor results. Also, there was the group who advocated either a partial or a complete colectomy but the results here were frequently disappointing.

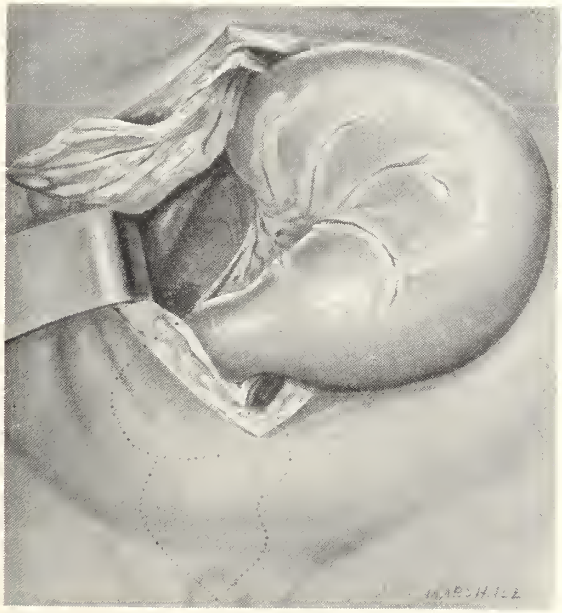

FIG. 1. Dilated sigmoid colon with the normal or slightly narrowed rectosigmoid and rectal segments—congenital megacolon.

As far back as 1920 an Italian named Dalla Valle,[1] in studying the microscopic sections of the narrowed rectosigmoid and rectal segments of patients with congenital megacolon, noted a marked diminution or total absence of parasympathetic ganglionic cells between the muscle layers of the bowel wall. The nerve bundles were, however, invariably present throughout the involved bowel and were usually hypertrophied. These observations also were not fully appreciated and no attempt was made to correlate them with the pathologic disorder until within very recent years.

In 1946 Swenson and Bill[2] and also Hiatt,[3] working independently, observed that when a colostomy was performed on a child with Hirschsprung's disease invariably within a period of several months the dilated and hypertrophied colon would return to near normal size. However, upon closing the colostomy and re-establishing intestinal continuity the bowel would again undergo dilatation and hypertrophy. This led them to focus attention upon the narrowed rectosigmoid and rectal segments as perhaps being the primary site of the pathologic disease, and the dilatation and hypertrophy in the bowel above were felt to be secondary to a spastic obstruction existing below. Using balloons introduced into the colon at various levels, Swenson was able to demonstrate that peristaltic waves were normal and rhythmic in the dilated bowel, but that peristalsis was absent in the rectosigmoid and rectal segments. Hiatt, on the other hand, observed not a total absence of peristalsis in the distal bowel but, instead, this segment was found to undergo a mass type of contraction —a purposeless type of peristalsis—which was not integrated with the normal waves in the dilated bowel above. Thus, both observers felt that a spastic state existed in the rectosigmoid and rectal portion of the bowel which were devoid of parasympathetic ganglionic cells and that these changes accounted for the dilatation and hypertrophy in the colon above. Their treatment of the disease has been directed toward the surgical removal of the rectosigmoid and rectal segments, leaving the dilated bowel intact.

There are several clinical observations which are of importance in establishing the diagnosis of Hirschsprung's disease. The child suffers marked constipation, usually dating back to birth, and frequently the mother will offer the information that the child has never had a spontaneous bowel movement. These children are subject to bouts of intestinal obstruction as result of marked fecal impactions and may even develop a perforation of the colon. The childhood mortality in this disease is high without treatment, as evidenced by the rarity that one encounters this entity in adulthood. Also, it is generally observed that these children grow and develop poorly.

2. *Functional Megacolon.*—In this type of megacolon the symptoms are much less pronounced than in a case of true Hirschsprung's disease. The constipation is less marked and may not be present until the child is two or three years of age. The mortality and morbidity are low, and the findings in the colon are distinctly different from a case of Hirschsprung's disease. Here the entire colon is dilated and hypertrophied, the dilatation extending down to the anus (Fig. 2). Parasympathetic ganglionic cells are found to be present in the rectosigmoid and rectal segments. The only objection to the above statement is that voiced by Hiatt,[3] who feels that in a small number of these children with distressing symptoms there may exist a diminution of parasympathetic ganglionic cells in the lower one-third or one-half of the rectal segment. Not all observers, however, share his view concerning this point at the present time, but if his findings are ever generally accepted, some cases which are now classified as functional megacolon may well represent milder forms of true Hirschspung's disease.

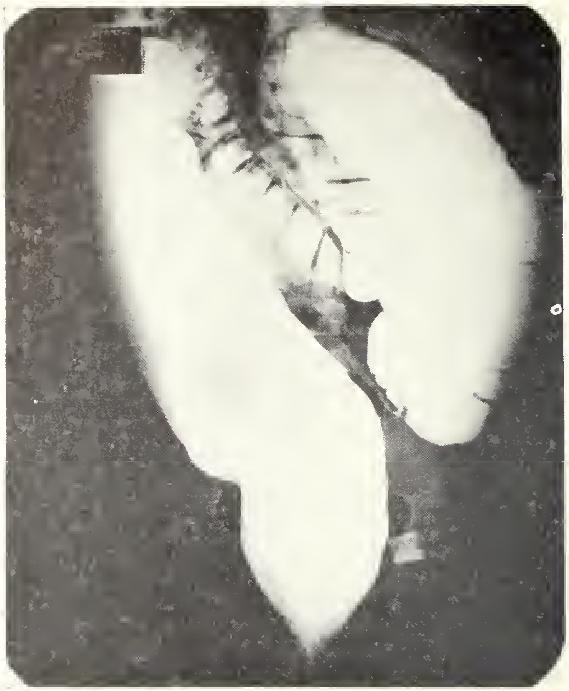

FIG. 2. The colonic dilatation extending down to the anus characteristic of functional megacolon.

The majority of patients with the dilated bowel extending down to the anus may be managed quite satisfactorily on medical treatment. The etiology of this condition at the present time is unknown but contributory factors may be faulty eating habits, improper diet and poor bowel training. Only rarely is an operation indicated in this group, and in such cases it is sufficient to resect the redundant portion of the colon, usually the sigmoid, thereby reducing the total absorptive area of the bowel.

Occasionally one encounters an individual with a long and redundant sigmoid colon, the remainder of the colon being normal. The elongation is often the result of chronic constipation, but in a few cases the redundancy may be congenital (dolichocolon). These individuals may go through life without undue difficulty but some are prone to develop a volvulus or torsion of the sigmoid colon.

3. *Organic Obstructive Megacolon.*—Megacolon due to organic obstruction needs only passing comment, but cases are reported of sacrococcygeal teratomas and other extrinsic pelvic growths producing pressure on the distal bowel with resultant megacolon. Also, in any age group one may encounter congenital or acquired strictures, developmental defects and benign and malignant new growths in the terminal segment of the colon, producing some degree of dilatation of the bowel proximal to the site of the lesion.

Operative Treatment of True Hirschsprung's Disease

At the present time Swenson[4] feels that all children in whom the narrowed rectal segment can be demonstrated by barium enema study should be subjected to operation, unless severe constitutional disease or other contraindications exist. Certainly the ultimate future holds little for these children without surgery. Swenson has now operated upon over a hundred cases; his mortality has been kept quite low; his results have been excellent and some of the children have been followed for almost five years.

In preparing a child for operation a high vitamin, high caloric liquid diet is used for approximately three weeks prior to operation. Mineral oil is given daily along with saline enemas, care being taken to instruct the mother or nurse never to use a water enema so as to avoid a state of low sodium shock as observed by Hiatt.[3] Aureomycin is given three or four days prior to surgery.

Briefly, the operative technique consists of the removal of the rectosigmoid and rectal segments along with the distal 10-15 centimeters of the sigmoid colon so as to insure the complete removal of the entire aganglionic portion of the bowel. The proximal cut end of the sigmoid is then brought down and anastomosed to the rectal stump using an ingenious maneuver devised by Swenson[5] in which the anastomosis is done via the perineal route. It is important to place the suture line no further than 2 centimeters above the mucocutaneous junction.

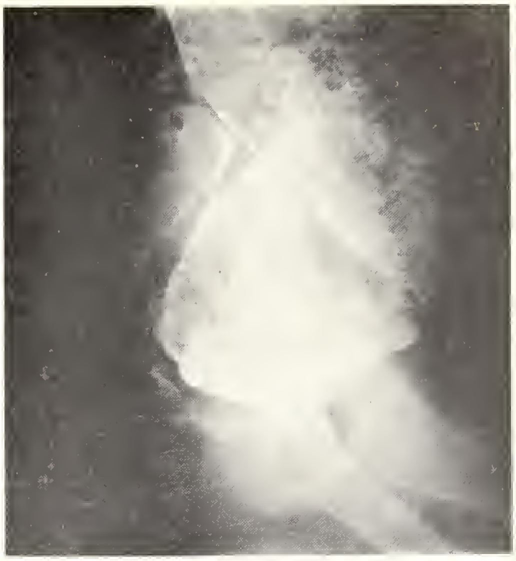

FIG. 3. Oblique view of narrowed rectal segment demonstrated with barium enema (preoperative).

During the past one and one-half years I have had the opportunity to operate upon two male patients with true Hirschsprung's disease. The first patient, seven years of age at the time of operation, has now been followed for seventeen months. He has normal stools daily and barium enema studies show that his colon has diminished considerably in size, and he is able to expel the

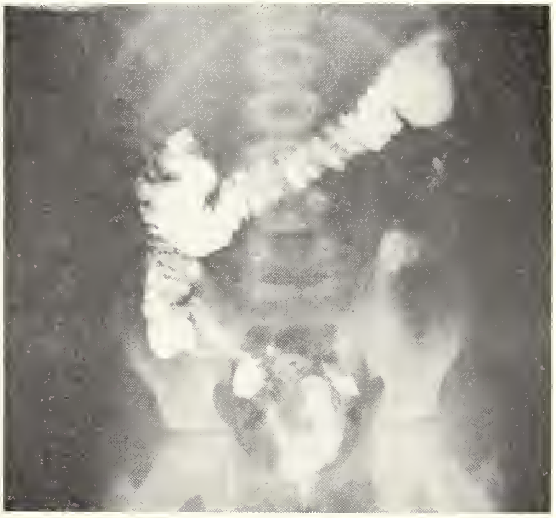

FIG. 4. Postexpulsion barium enema six months postoperatively showing practically all of barium being expelled.

entire barium enema. The second patient, a fifteen-year-old male, has now been followed for twelve months with no recurrence of symptoms. Fig. 3 shows the preoperative barium enema on this boy with the narrow rectal segment demonstrated best in an oblique view. Fig. 4 shows the post-expulsion barium enema film six months following operation.

Summary

A brief discussion of the different types of megacolon has been presented. The congenital form of the disease is of especial interest to the surgeon. Swenson's operation, or one of the modifications of it, appears at the present time to offer much hope to these unfortunate children.

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Ruptured Endometrial Cysts as a Cause of Acute Abdominal Symptoms (Endometrial Pelviperitonitis), Pratt, J. H., Higgins, R. S., and Foust, G. T., Jr., Am. J. Obst. & Gynec., 63:90, 1952.

It is being recognized more and more that endometriosis is a process which, because of its pathologic features and its various localizations, is likely to manifest itself in the most diverse clinical fashions. In many instances the symptoms are vague or the disease is silent, so that the diagnosis becomes extremely difficult or impossible and the true nature of the disease is recognized only at laparotomy. If the perforation is minimal or is partially obstructed or covered, the outflow of the contents is slow and the effusion is blocked by plastic peritoneal reaction resulting in many adhesions. If the perforation is larger it manifests itself clinically by symptoms of an acute condition of the abdomen necessitating surgery. This condition is called "endometrial pelviperitonitis." When the perforation is wide open, the symptoms are similar to those of ruptured ectopic pregnancy, or ruptured follicle or corpus luteum cyst. When the symptoms of severe pelvic peritoneal irritation are not apparent and some localizing signs are present, one might well make a diagnosis of acute appendicitis or torsion of an ovarian cyst. In a review of the literature through 1945 reports of 15 cases of ruptured endometrial cysts were found. While rupture of an endometrial cyst causing acute abdominal symptoms is unusual, it is not rare; 10 cases are reported herein. The diagnosis is difficult to make preoperatively but the presence of the condition should be suspected in a patient with a low abdominal lesion who is not acutely ill and who has physical signs of pelvic peritoneal irritation without localization. This picture plus a past history of increasing dysmenorrhea and the presence of tender nodules in the cul-de-sac or on the uterosacral ligaments is at least suggestive of a ruptured endometrioma. The treatment is exploration and conservative surgical measures in young patients. The question of radical surgical treatment in older patients is discussed and the reasons for bilateral oophorectomy are mentioned. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

CASE REPORT

Carcinoma of the Stomach: Survival Nine Years After a Partial Gastrectomy

H. H. SHOULDERS, M.D., F.A.C.S., and G. E. JOHNSON, M.D., Nashville, Tenn.

We applaud the courageous efforts that are being made by so many surgeons to find a more effective surgical treatment for carcinoma of the stomach. It is not our purpose to enter the debate that is in progress on the question of partial versus total gastrectomy for this fatal disease.

We are reporting the case of a patient who:—(1) survived the operation of partial gastrectomy for cancer of the stomach, in spite of the fact that he was a poor surgical risk; (2) is living more than nine years after the operation; and (3) is apparently cured. He is comfortable, well nourished and able to work without constant medical attention as to diet, vitamins, etc.

As yet, we share the opinion of those who believe that the decision as to which of the two procedures (partial or total gastrectomy) is preferable should not rest entirely and alone on the relative number of "cures" achieved by each in the hands of a few master surgeons. The degree of comfort and well-being the patient is to enjoy while living is also to be considered in evaluating these two procedures. Allen[1] makes the following pertinent observation on the autopsy findings in patients who had been treated for carcinoma of the stomach by partial gastrectomy in the Massachusetts General Hospital: ". . . it was very interesting to us to find that when the patients did die of recurrence following subtotal resection, with removal of the omentum, with removal of a part of the duodenum, and sometimes a fairly adequate glandular dissection in the region of the left gastric vessels, they did not develop their return of disease in the stomach itself, or in a region which we felt might have been removed by a more radical original procedure."

Case Report

Hospital Record No. 79736: Tumor Clinic No. 215. J. B., a Negro man, 61 years old, was admitted to the Nashville General Hospital December 10, 1942.

Chief Complaint. Dyspepsia, poor appetite, loss of weight and constipation of several weeks' duration.

History. He had been treated in the out-patient department for three months for shortness of breath, edema of the ankles, loss of appetite, dyspepsia and loss of weight. Under treatment his shortness of breath and edema of the ankles had improved. The dyspepsia and loss of appetite had not improved. The persistence of these symptoms led to his admission to the hospital for a more complete study.

Past History. He was treated in another hospital for peptic ulcer six years before this admission. He had been treated for syphilis in 1928; treatment was adequate according to the reports received.

Physical Findings. The patient was a well-developed but emaciated colored man who appeared to be chronically ill. The skin was dry, loose and scaly. No physical evidence of congestive heart failure was noted. There was some tenderness in the epigastrium; a questionable mass was felt in the same region. There were no other physical findings worthy of notice.

Laboratory Findings. The blood showed R.B.C., 3,550,000; W.B.C., 9,200; Hgb., 10 grams. The Kline was negative, N.P.N. 31 and blood sugar, 83 mg. per cent. The urinary findings were: albumin a trace, sugar negative and microscopically an occasional W.B.C.

Gastric Analysis	*Total Acidity*	*Free H. C. L.*
Fasting	7.0°	None
Alcohol	7.5°	None
Histamine	10.0°	None

The spinal fluid findings were a sugar of 35 mgm.%; negative Wassermann, a protein of 45 mgm.%, negative globulin and a flat mastric curve.

X-Ray Findings. The chest was essentially normal. The G. I. series was reported as follows: "The stomach is normal in size, shape and position. There is deformity at the pyloric end of the stomach, probably due to a new growth. At the end of 5 hours there is about one-third retention in the stomach." (Fig. 1.)

He was transferred to the Surgical Service on December 27, 1942, and an exploratory laparotomy was performed for possible carcinoma of the stomach on the following day.

Operative Findings. A mass about the size of a small lemon was found at the pyloric end of the stomach and hard lymph nodes were felt in the gastrohepatic omentum near the pylorus. No nodules were felt in the liver. The stomach was freely movable.

Operation. A partial gastrectomy was performed. A portion of the duodenum (as low as possible), a large portion of the stomach, the entire lesser curvature and the gastrohepatic omentum were removed. The use of the machine stitch devised by one of us (H. H. S.[2]) was employed to accomplish an effective closure of the short duodenal stump and the partial closure of the end of the stomach. A gastrojejunostomy was done in front of the colon.

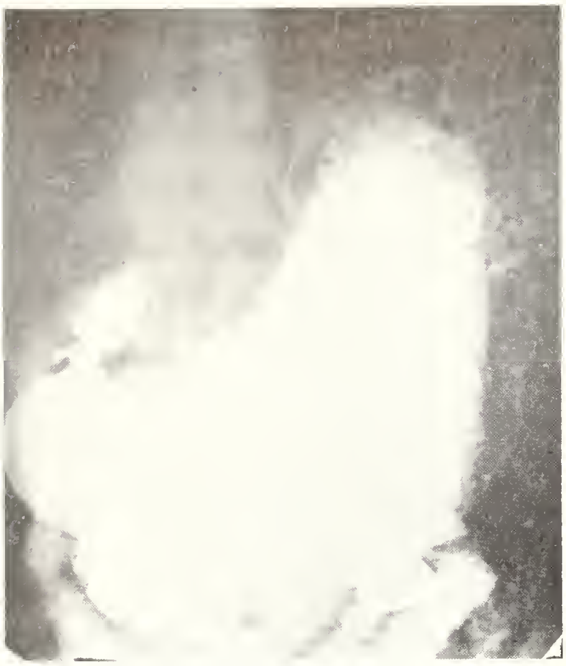

FIG. 1. First diagnostic film showing deformity at the pylorus in December, 1942.

Pathologic Report. "Gross Pathology: Specimen consists of the lower three-fourths of the stomach including duodenal ring and a portion of duodenum. Mucosa generally is moderately hyperemic. Rugae appear normal in the cardiac portion. There is an area of thickening and induration along almost the entire lesser curvature, narrow toward cardiac end, but broadening to 4.5 cm. in width at pyloric end. On section the mucosa of the involved area is somewhat thickened and appears grayish-yellow in color. This abnormal tissue involves the smooth muscle but does not appear to extend to the serosa. Serosa externally does not appear remarkable.

"Microscopic Pathology: Sections from the indurated area show the mucous glands to be quite variable in size and shape and composed of deeply staining epitheleal cells which are quite variable in size. These malignant glands are invading the superficial portion of the muscle. All of the layers of the stomach are heavily infiltrated by plasma cells.

"Diagnosis: Adenocarcinoma of Stomach.

"Remarks: Judging from the gross and histological findings, this seems to be an early case of carcinoma of the stomach." (Fig. 2.)

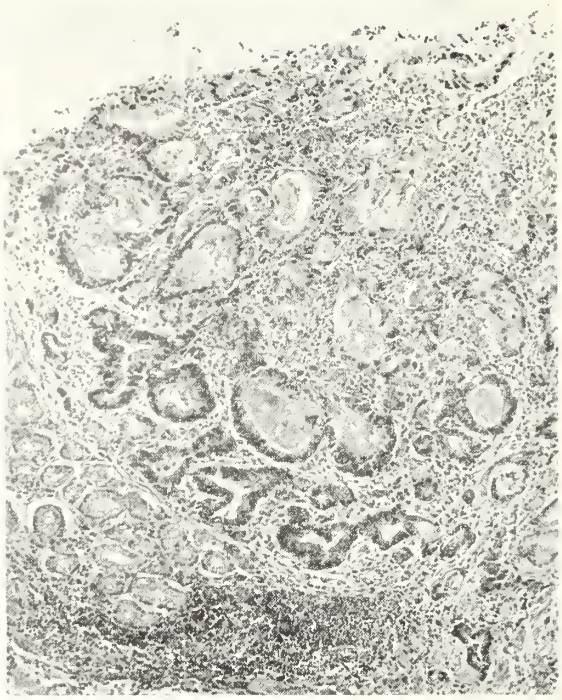

FIG. 2. Shows the microscopic section (x180).

Follow Up. This patient was referred to the Middle Tennessee Tumor Clinic January 17, 1943, for follow up. He has been observed in the Tumor Clinic at intervals since that time. He has gained weight, has been back at work and has remained comfortable and well since. X-ray studies have been made repeatedly. There has been no evidence of recurrence in the remainder of the stomach nor of metastasis. (Fig. 3.)

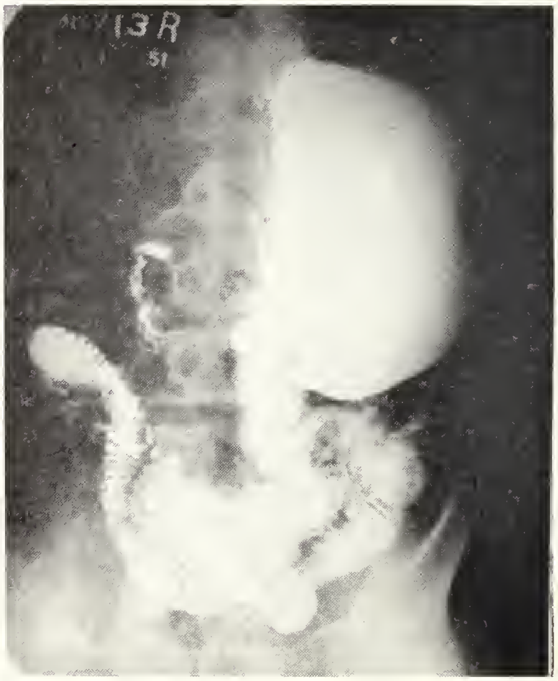

FIG. 3. X-ray examination of May 1, 1951, showing no evidence of recurrence in the stomach.

His last visit to the Tumor Clinic was on February 5, 1952. He reported that he was at work, feeling well and had no abdominal discomfort. No evidence of recurrence of his disease was found by the examiners. He is cured according to all the criteria of cure in vogue at the present time.

Comment

This patient had gastric symptoms, loss of appetite, dyspepsia and weakness for three months prior to his admission to the hospital. Symptoms referable to the cardiovascular system overshadowed the abdominal symptoms for the three months. It was the persistence of these latter complaints that led to his admission to the hospital for a complete study.

This history points up the fact which has been emphasized by so many surgeons that, —loss of appetite, loss of weight and some discomfort in the abdomen in a person above forty years of age, who has been free of stomach symptoms, should create a strong suspicion that cancer of the stomach is present. Ogilvie[3] makes the observation that the following inscription should be up in neon lights in every restaurant in America, "Indigestion does not start after 40 in a man who has been able to eat anything until then."

Summary

1. A case of carcinoma of the stomach is reported. The patient is living and well nine years after a partial gastrectomy.

2. The final decision as to whether total gastrectomy is to supplant the operation of partial gastrectomy in many cases of carcinoma of the stomach will be determined finally on the basis of the consideration of: (a) the rate of cure in each together with (b) the degree of comfort and well-being achieved for the patient after operation.

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The Care of Hand Injuries—Surface Injuries. Committee on Fractures and Other Traumas, American College of Surgeons.

First aid of wounds of the hand should give protection against further injury or contamination. This can best be accomplished by the application of a sterile protective dressing with splinting in the position of "grasp." All efforts at further treatment should be postponed until adequate operating room facilities are available.

Early definitive care should include adequate cleansing, removal of all devitalized tissue, complete hemostasis, surgical repair where required, and the application of a protective dressing in the optimal position, followed by rest, elevation of the hand, and early directed active motion.

Burns, abrasions, and avulsions may cause destruction of an area of the skin covering of the hand. The treatment of such injuries should afford (1) protection against infection, (2) early restoration of skin covering, and (3) protection against disabling scars or contractures. Definitive treatment should be accomplished with the utmost gentleness. Irrigation and cleansing of the skin with saline and a neutral soap, removal of loose tabs and fragments of skin (do not open blisters), application of fine-mesh vaseline gauze and a bulky dressing of mechanics waste covered with an elastic knit bandage is the treatment of choice. The hand should be splinted with this dressing in place. Care should be taken that the fingers are separated in the dressing to avoid webbing by scar.

The initial dressing should be left in place for twelve to fourteen days unless there is evidence of active infection. All dressings should be done under completely aseptic conditions. Granulating areas from which the slough has separated should be covered with split thickness grafts. Dressings should be repeated every seven days until epithelialization is complete. Early grafting is the best assurance against infection, scarring, and contractures. As soon as epithelialization is complete, directed active use and exercise of the hand should be started and appropriate occupational therapy prescribed. (Abstracted by Benjamin F. Byrd, Jr., M.D., Nashville.)

PREFERRED PROCEDURES

Precordial pain—probably no other pain causes so much anxiety or is more commonly misinterpreted. Minor ST segment or T wave changes may be found in the EKG, compatible with age, permissable of a casual game of golf, if the history reveals that the pain is non-cardiac in origin, say due to spinal arthritis or other cause. The history almost always is the sole means of evaluating precordial pain and the objective findings in a given case.

DIAGNOSTIC PROCEDURES IN PRECORDIAL PAIN

E. WHITE PATTON, M.D., Chattanooga, Tenn.

Precordial pain may be the manifestation of many functional and pathological conditions and the diagnostic procedures which may be employed in the differential diagnosis of precordial pain are numerous. It is beyond the scope of this paper to consider all causes of precordial pain or all the methods of their differentiation. Instead discussion will be limited to some of the more common conditions and the application of the usual diagnostic procedures in their differentiation.

The most important methods of differentiation employed in the analysis of precordial pain are careful history and physical examination, electrocardiography, and fluoroscopic and radiographic studies. *In spite of the objective importance of the latter, it is impossible to overestimate the value of a careful history in the evaluation of precordial pain.* Every feature of the pain as it occurs in a particular patient—its location, character, its relation to bodily function, its duration and transmission, etc.—is of paramount importance in diagnosing the cause. Careful analysis of the history will frequently yield the correct diagnosis and at all times will simplify the choice of necessary additional procedures. Too much reliance on objective methods with inadequate evaluation of the history may be particularly hazardous where one encounters the patient who has two different conditions causing precordial pain. For example, an elderly male may have coexisting hypertrophic arthritis of the spine and angina pectoris. Radiographic studies reveal the obvious spinal changes whereas an electrocardiogram may show no frank abnormality. Hence treatment is directed at one cause of precordial pain while the much more important cause is overlooked. Such a situation may be avoided by careful analysis of the history. Thereby one would obtain the typical story of spinal arthritis with the relation of its pain to motion and position but, more importantly, the characteristic precordial pain on exertion resulting from angina.

In a discussion of specific causes of precordial pain, first consideration should be given pain resulting from disturbances in the adequacy of blood supply to the myocardium. If relative, transient, and not necessarily associated with muscle damage—angina pectoris. If absolute and permanent—coronary thrombosis with myocardial infarction. The latter is much more easily disposed of than the former.

Since the classic description of **coronary thrombosis** by Herrick in 1912, a wealth of clinical information has accumulated which delineates reasonably clearly the clinical picture of myocardial infarction. The sudden onset of sustained, crushing precordial pain not necessarily associated with exertion, the signs of shock usually following, the friction rub, the typical electrocardiographic changes in initial or serial electrocardiograms, and the subsequent indications of tissue necrosis as evidenced by fever, leukocytosis and elevation of the sedimentation rate characterize the picture of coronary thrombosis. In spite of the fact that mistakes in the diagnosis of coronary thrombosis naturally are made—now probably more frequently in falsely diagnosing the condition than in overlooking it—it still offers a fairly dramatic and definite picture. One confusing condition which deserves mention at this point is a dissecting aneurysm of the aorta. The distinction between the two conditions becomes extremely important since the introduction of anticoagulants in the treatment of coronary thrombosis. Obviously the administration of anticoagulants in the presence of a dissecting aneurysm would be a disastrous mistake. The differentiation between the two conditions may be extremely difficult, but if dissecting aneurysm is considered it usually may be recognized by the more severe and protracted type of pain, less responsiveness to the administration of opiates, and most characteristically by inequalities or absence of the peripheral pulsations.

Angina pectoris is by far the most important condition to be considered in the evaluation of precordial pain. It is the one condition most easily confused with other causes and yet is the only one of these that is a mortal threat to the patient's life. Traditionally much consideration has been given to the location, character, transmission and severity of anginal pain. While angina is characteristically an oppressive precordial pain of moderate severity with radiation to the neck, left shoulder or down the left arm, these features are of secondary importance. By far the most important feature of anginal pain is its relation to activity and its response to rest and to nitroglycerin. Another important characteristic of anginal pain is its duration. Careful analyses of anginal pain have indicated that the great majority have a duration of more than one minute and less than thirty minutes. This is an extremely helpful point in differentiating it from many of the other causes of precordial pain. While angina typically is precipitated by muscular activity it must be remembered that a small but definite number of patients with angina pectoris may suffer a typical attack after assuming the recumbent position. The mechanism of this is not clear. Consequently a diagnosis of otherwise typical angina must not be discarded merely because of the occurrence of pain after assuming the recumbent position. Secondary to the importance of the history in the diagnosis of angina is electrocardiography. Resting electrocardiograms may or may not show any abnormality in angina pectoris. When present, the changes usually involve minor alterations of the ST segments and the T waves. However, many of those who show normal resting electrocardiograms will show typical ST segment shifts or T wave alterations on standard exercise tests. These are most notable on the lateral precordial leads. While exercise tests in the face of potential coronary disease have been the subject of much criticism, it is generally felt that such tests are reasonably safe if carefully observed and if exercise is stopped immediately on the appearance of pain.

Spinal arthritis with nerve root irritation is a fairly common cause of precordial pain. Here too the history is helpful in that the pain is primarily related to movement rather than exertion, is frequently most troublesome while at rest at night or on first moving after a considerable length of time in one position—for example, after sitting in church for an hour—and often striking relief is afforded by salicylates. Obviously spinal arthritis per se causes no electrocardiographic abnormalities. Radiographic studies of the spine confirm the presence of spondylitis and offer a positive diagnosis.

A frequent cause of precordial pain are functional or organic disorders of the upper gastrointestinal tract. Most common among these is esophagospasm and hiatal herniation.

Esophagospasm may cause pain entirely similar to angina in its location, severity and radiation. However, it rarely bears relation to muscular activity and frequently follows or is precipitated by alcoholic beverages, highly seasoned food and similar dietary indiscretions. The presence of any degree of dysphagia is a strong indicator of esophagospasm. Objective methods of diagnosis of esophagospasm are essentially limited to fluoroscopic and radiographic visualization of the esophagus after a barium drink. Frequently no clear demonstration of the spasm may be found. It is well to point out that often spasm may be demonstrated at the time of pain and disappear coincident with the cessation of pain. The therapeutic efficiency of atropine and similar antispasmodics in this condition is an additional help in diagnosis. Nitroglycerin may be beneficial but usually never as dramatically and rapidly as in angina pectoris.

Similarly **diaphragmatic hiatal hernias** may produce precordial pain highly suggestive of angina. But again the relationship to activity is not so consistent and the duration is usually more prolonged. Moreover, pain from this source frequently follows a large meal and may be relieved by belching. Characteristically the pain is quite pronounced in the recumbent position, particularly if closely following a meal and may be relieved by arising and "walking it off." Again fluoroscopic and radiographic methods are of primary importance in this diagnosis. Examination should always include a study in the "head down position" since frequently small herniations may be overlooked if the examination is done only in the upright position. And it is important to point out that small hiatal herniations are more frequently the cause of precordial pain than are large herniations. A normal electrocardiogram lends further support to the diagnosis.

Pericarditis as a cause of precordial pain is assuming a greater importance in view of the increasing frequency of acute pericarditis, usually following a respiratory infection, which is considered viral in origin. Pain from this cause is more likely to be confused with coronary thrombosis than with angina pectoris. In contrast to coronary thrombosis it is more frequent in the younger age groups and the pain is more fleeting and stab-like. Frequently it is accentuated by respiration and by swallowing. Electrocardiographic changes, fever, and leukocytosis may occur in a manner very similar to myocardial infarction—though usually much earlier in the course of the disease in the case of pericarditis.

Attention should be called to spontaneous **mediastinal emphysema** as a cause of precordial pain which may be extremely difficult to differentiate from coronary thrombosis. Characteristically it occurs in young men, has a sudden onset and often all the features of a myocardial infarction—including suggestive electrocardiographic changes. Its differentiation lies in the recognition of the typical "crunching, tissue paper-like" adventitious sound caused by free air in the mediastinum and by the radiographic demonstration of this free air.

Certain of the more common causes of precordial pain have been discussed as to their diagnostic characteristics. It should be emphasized again that the primary object in the differential diagnosis of precordial pain is the differentiation of angina pectoris or coronary thrombosis from noncardiac causes. The importance of this is obvious when one considers the ominous label that a diagnosis of coronary heart disease places on the patient. *Finally, the paramount value of a careful history in the evaluation of precordial pain is emphasized. It is by far the most important single diagnostic tool in the differentiation of causes of precordial pain.*

CLINICOPATHOLOGIC CONFERENCE

The John Gaston Hospital*

History. M.F.B., colored female age 27, began having eye complaints shortly following the birth of her third child in December, 1949, and was admitted on the eye service of this hospital in April, 1951. At that time her complaints were pain in both eyes and the development of noticeable opacities and dim vision in the left eye. Past history revealed that she had carried three pregnancies to term without complications, had no important illnesses prior to the present one and denied venereal disease. Systems review revealed that her weight was constant and appetite good, no known fever, and a cough of three weeks' duration.

Eye examination revealed the following bilateral abnormalities: moderate conjunctival congestion, corneal opacities, mutton-fat keratic precipitates, atrophy of the iris, ciliary congestion, posterior synechiae and obscured fundi. The left lens could not been seen; the right lens was clear.

General physical examination revealed the following positive and negative findings: temperature 99.2, poor teeth, no remarkable lymph nodes, lungs clear to auscultation, no abdominal organs or masses palpable, joints normal and skin clear.

Laboratory work done in the clinic and in the hospital included the following: negative blood tests for syphilis, sedimentation rate maximum fall per minute corrected 1.2 mm., hematocrit 45 and buffy coat 1.2, negative urinalysis. Routine agglutinations were negative; total serum protein 8.5 Gm. with albumin being 5.2 and globulin 3.3. First and second strengths PPD tests were negative. Seventy mm. chest X-ray revealed hilar adenopathy; X-rays of the hands were negative.

Treatment with streptomycin, PAS (para-aminosalicylic acid) and sterile milk injections were given. Old tubeculin was injected intradermally at intervals of three days and a 1 + reaction was observed on the fifth injection which was 0.2 cc. of a 1:1 million concentration. She was discharged after 32 hospital days. In the Clinic, treatment was continued with old tuberculin and in September local cortisone therapy was used. For a time there appeared to be some improvement but an exacerbation occurred in November and patient was re-admitted to the hospital.

X-ray of the chest at this time showed left hilar adenopathy and minimal infiltration into the base of the left upper lobe. Hematocrit was 38 and buffy coat 1 mm. The differential count showed lymphocytes 41% and polys 58% (segmented). Total protein was 7.4 Gm. with albumin of 4.0 and globulin 3.4. General physical examination at this time was essentially unchanged. Eye examination again revealed interstitial keratitis, uveitis and secondary glaucoma.

Intravenous typhoid injections were given with no significant febrile response. Pupils at this time would not dilate with atropine. On the fifth day after admission, a subconjunctival injection of adrenalin, cocaine 4% and atropine was given. About 15 minutes after this injection the patient became very restless, began coughing and went into shock. Pulmonary edema developed. Measures to combat the shock were unsuccessful and the patient expired about three hours later.

DR. B. R. GENDEL: The important manifestations in this 27-year-old colored female were the ocular disease and the enlarged mediastinal lymph nodes. The patient died under unfortunate circumstances. In this discussion I will consider first, the cause of death and second, the nature of the underlying disease.

The patient was admitted to the hospital in good condition and was given an injection of a solution of 4 per cent cocaine. This form of treatment is usually reserved for those cases of eye disease with synechiae which fail to have pupillary dilatation under the usual measures. The patient died promptly following the injection. Cocaine produces a direct toxic reaction upon the myocardium and stimulates the central nervous system. This stimulation of the central nervous system is the basis for the addiction because of its cerebral "lift." The drug is also a sympathomimetic and is therefore used to dilate the pupil. In some individuals there is hypersensitivity to the drug and the small amount which is usually injected in such instances as this may be the cause of death probably as a result of the toxic effect on the myocardium.

Considering the basic illness,—the eye complaints began following a full term pregnancy in December, 1949. It may be possible to conjure up some idea of increased corticosteroids during pregnancy with a sudden drop post-partum due to temporary adrenocortical insufficiency and the advent of the disease through "lowered resistance," but this is more or less in the category of mental gymnastics and it is unnecessary for us to proceed further in this direction. The patient had some conjunctival congestion, corneal opacities and mutton-fat corneal precipitates. The latter occur in tuberculosis, sarcoidosis, brucellosis and psittacosis. Some observers think they can distinguish the mutton-fat precipitates caused by the first two disease processes, while others are unable to do so. The posterior synechiae indicate that this was a chronic condition. The fundi were obscured due to changes in the media.

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The peripheral lymph nodes were not enlarged. Frequently we depend on the biopsy of enlarged peripheral lymph nodes in Boeck's sarcoid as a means of establishing or confirming our suspected clinical diagnosis. This was not available in this case. The skin was also clear as it often is in sarcoidosis. Routine serologic agglutinations were negative and this helps to rule out brucellosis. It also helps to rule out tularemia, which might explain the enlargement of the mediastinal lymph nodes observed on the chest roentgenograms. The total serum proteins were 8.5 Gms., but the albumin was elevated to 5.2 Gms., and the globulin was essentially normal. This is rather peculiar, for in our experiences with sarcoidosis the globulin is frequently elevated but the albumin is never increased to this degree. However, in a review of many cases of sarcoidosis reported in the literature, I did encounter one case of sarcoidosis in which the albumin was elevated.

The tuberculin test was negative. In tuberculosis the tuberculin test is negative only in a moribund patient or the patient with intercurrent infection such as measles. This patient was not in extremis (prior to injection of cocaine), hence a negative tuberculin probably indicates that tuberculosis was not present. Apparently the patient did receive some streptomycin in the belief that the disease might be tuberculosis or perhaps in the belief that sarcoidosis has a similar if not identical etiology. At this point I believe it would be well to ask Dr. Carroll to interpret the roentgenographic findings.

DR. DAVID CARROLL: On the X-ray films it is noted that the heart is not enlarged, the right lung shows no important changes but the left hilar nodes are much enlarged. (Fig. 1.) If this were sarcoidosis, one should also expect to see nodes enlarged on the right side as well. The changes in the left upper lobe apparently are not infiltration but are interpreted rather as a streaking of atelectasis. Dr. Gendel has mentioned sarcoidosis as a possibility. Characteristically, sarcoidosis shows on X-rays of the chest, bilateral hilar adenopathy and mediastinal node enlargement. The right peritracheal nodes are also involved and tiny miliary nodules similar to those in miliary tuberculosis are scattered throughout the lung fields. Since only the left hilar nodes are enlarged in this particular case, the findings are not too characteristic of the classic picture of Boeck's sarcoid. It is, nevertheless, compatible with that disease. As for the X-rays of the hands, we find no changes in this case, but we should remember that only about 10 per cent of Boeck's sarcoidosis cases show any alterations in the metaphalanges. The final X-ray taken during the terminal course of the patient after the injection of the cocaine shows considerable pulmonary edema.

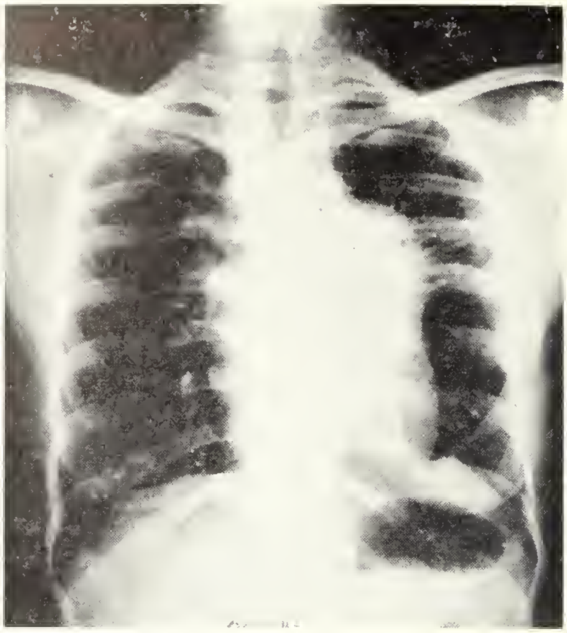

FIG. 1. The X-ray of the chest taken on last admission to hospital shows prominence of lymph nodes in left hilar area. The left main-stem bronchus and its upper and lower lobe branches can be seen within the hilar mass.

DR. GENDEL: We should now proceed to consider the differential diagnosis from two points of view, the eye changes and the enlarged mediastinal lymph nodes.

Eye

1. Tuberculosis
2. Boeck's sarcoid
3. Uveitis, non-specific
4. Brucellosis, etc.

Mediastinal Nodes

1. Tuberculosis
2. Boeck's sarcoid
3. Hodgkin's disease
4. Other mediastinal tumors

Certainly the changes in the eye are fairly characteristic of tuberculosis and of Boeck's sarcoid. While it is possible that the patient had a non-specific uveitis unrelated to the chest condition, this does not appear likely. The mediastinal node enlargement is not of the classic sarcoid hilar-nodular type with a clear zone between the enlarged nodes and the cardiac border. There appears to be primarily a unilateral adenopathy and we might consider Hodgkin's disease as a possibility, although I have never seen a uveitis with it, and I therefore doubt that the disease process here is due to Hodgkin's disease. There is very little to suggest that a mediastinal aneurysm is present. The combination of changes in the eye and enlarged mediastinal nodes is most suggestive of sarcoidosis; other factors also favor this diagnosis. First, this patient is colored, and in our group of 30 patients, 85 per cent have been colored. In a series reported from the army, the disease was 22 times as frequent in the colored as in white individuals. The sex incidence is of no importance. Ninety per cent of the patients have enlargement of the peripheral nodes and it is probable that, at some time, all cases of sarcoidosis do have peripheral lymphadenopathy. In this particular case there were no enlarged peripheral nodes and consequently this was of little help in establishing the diagnosis. In addition, skin lesions were not present in this case, but that also does not exclude sarcoidosis. About 40 per cent of our series had skin lesions and the reported incidence varies from 10 to 40 per cent in other series. The changes in the eye occur in 20-40 per cent of the reported cases, while in our series of 30 patients about one-third had ocular changes at some time. Bone changes occurred in only 7 per cent of our cases (in two of 30 cases); our cases had repeated X-rays over a period of years. It should be noted that the lesions are usually in the bones of the hands and feet but may rarely occur in the other bones of the body.

The inability to establish a histologic diagnosis of sarcoidosis because of the failure to find peripheral lymph node enlargement or the absence of skin lesions occurs not infrequently just as in this case. Thus, it would be of some value to discuss some of the possibilities which are offered in order to establish the diagnosis. Some attempt to confirm the suspected clinical diagnosis by tonsillectomy, and histologic examination of the removed tonsils. In the Scandinavian literature this is reported to have given a high percentage of positive results. In most of our cases a tonsillectomy had already been performed many years before. We were able to utilize this procedure in only one case, but failed to find anything of importance histologically. Another procedure in which the nodes are readily obtained is to make a simple incision in the lower neck and removing from the mediastinum a little fat which usually will include a few small nodes. This may confirm the diagnosis of sarcoidosis. A liver biopsy is another very helpful procedure in establishing the histologic diagnosis. In some series it has been reported to be positive in 75 per cent of the cases. Recently in a patient with erythema nodosum and chest findings similar to those in this case a liver biopsy showed the typical histologic lesion. The sternal marrow examination has not been helpful in our series but it is probable that by the smear method we have failed to show as many changes as might have been disclosed had we sectioned the clotted marrow within the syringe. This might more likely show the granulomas.

It is of some importance to try to distinguish tuberculosis from Boeck's sarcoid since apparently cortisone produces a favorable therapeutic response in Boeck's sarcoidosis; on the other hand, recent animal and human work indicate that cortisone may be harmful in tuberculosis.

Dr. Gendel's Diagnosis

1. Sarcoidosis of the eye, mediastinal nodes and lungs
2. Hypersensitivity to cocaine

DR. YOUNG: I believe that it would be best to hold all questions until after the discussion of the pathologic findings. I might say at this time that the agglutination test for brucellosis does not actually exclude the disease. We only do one agglutination test here. An accurate diagnosis rests upon a positive blood culture.

DR. RUSSELL S. JONES: *Anatomic Diagnosis:*

1. Boeck's sarcoid of the eyes, mediastinal, tracheobronchial and mesenteric lymph nodes, lungs, liver, heart, urinary bladder, periadrenal area and pituitary
2. Cocaine reaction with shock, pulmonary congestion

We will first briefly mention the changes related to the cocaine reaction and then consider the more important and basic disease, sarcoidosis. There was some evidence of pulmonary congestion, but it is not marked at autopsy as might have been interpreted from the X-ray findings taken shortly before death. There is a little fluid in the pleural cavities; 100 cc. of serous fluid on the right, 150 cc. on the left; 50 cc. is present in the pericardial sac and about 350 cc. of fluid within the peritoneal cavity. There are also some minor changes in the convoluted tubular epithelium of the kidneys. Polymorphonuclear leukocytes are grouped about the outer scleral vessels. These will be discussed later in the reference to the other changes in the eye.

Pathologic changes in the hilar lymph nodes are not identical with those noted on the X-ray, for both the hilar lymph nodes on the right and left side are considerably enlarged and we can readily see that the peritracheal nodes on the right side are also enlarged and that the posterior-inferior mediastinal nodes about the esophagus and aorta are also considerably enlarged. The large mass of nodes immediately beneath the carina of the trachea are well demonstrated in the gross photographs. (Fig. 2.) On the cross-sections of the lymph nodes one may usually see a more central portion of deeply anthracotic pigmentation and about this there is a more prominent peripheral zone of light tannish and finely granular material devoid of anthracotic pigmentation. This is somewhat suggestive of recent development of these lesions. There is no marked zone of peripheral fibrosis, and no evidence of caseation necrosis. Microscopic examination shows not only old hyalinizing tubercles but also many small ones with only a little reticulin and collagen for-region within a group of tubercles a small mation in and about them. In a central zone of caseation necrosis is seen.

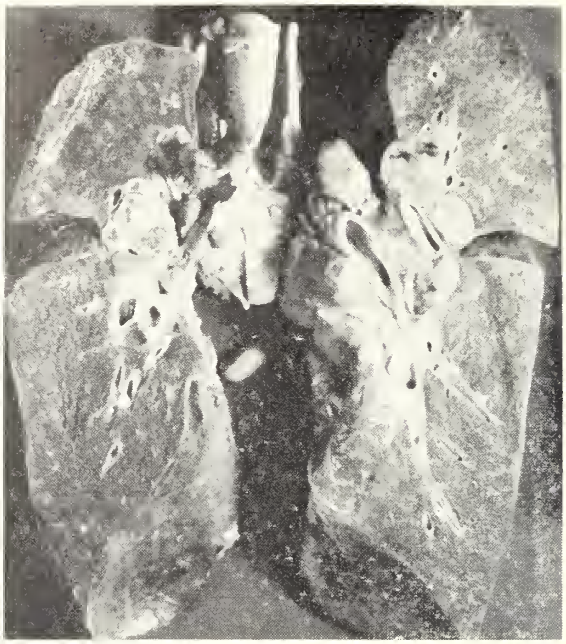

FIG. 2. Tracheobronchial lymph nodes are prominent bilaterally, being more marked on the left. Large lymph nodes are also encountered below carina and in the right peritracheal region. Closely grouped non-caseous tubercles are present in the right upper, left upper, and apex of left lower lobe.

In the lung the disease is most prominent on the left side in the upper lobe but is also present in the right upper lobe and the apex of the left lower lobe. In the pulmonary tissue the gross examination shows many minute lesions, somewhat opaque. There are no caseating areas observable. There are many more tubercles scattered throughout the upper lobe than one would gather from the X-rays, even from a cursory gross examination. Various microsections show much of the upper lobe to be studded with these small tubercles. Many of them are entirely without any appreciable degree of hyalinization or fibrosis and that again suggests a recent exacerbation of the disease. In one area, again, a very small area of caseation necrosis is seen. The other areas show rather dense formation of hyalinization. Gross examination of some of the little tubercles frequently shows some giant cells containing little cleft-like spaces, apparently the sites of now dissolved cholesterol esters. Other areas show more refractile material but there are no stellate bodies and there are no areas suggestive of lipoid pneumonia.

Each of the sections of myocardium shows small granulomas. These were characterized by some amphophilic debris resembling altered collagen or perhaps myocardium with associated small and rather atypical giant cells. These were similar to Aschoff bodies in size and location. In other areas there is considerable infiltration of mononuclear leucocytes. In some of the capillaries there is a prominence of mononuclear leucocytes. There is no evidence of pericarditis. The mitral valve miscroscopically shows a considerable amount of basophilic edema without any change in the overlying endothelium. The liver weighed 1,150 Gm. and grossly showed no important change, but on the microscopic examination many little granulomas are observed. Some of them are coalescing, many of them are with the portal areas, while others are scattered throughout any portion of the lobule. It is readily seen that a liver biopsy would have revealed the presence of these lesions. The spleen shows many little tubercles within the pulp, others within the malpighian bodies. They show varying degrees of hyalinization, some almost being completely hyalinized, others being quite recent without much deposition of collagen. The urinary bladder showed two small, granulomatous lesions resembling tubercles. The smooth muscle has an interesting change, the bulk of the cytoplasm is grouped into a prominent eosinophilic mass, while the intervening portion shows a slight basophilic and strand-like change.

No granulomatous lesions are encountered in the kidneys, the adrenal cortex and medulla. One small lesion is seen about an adrenal gland, however.

The gross changes in this case have already been well described in the clinical record. Microscopically we see the presence of a little tubercle-like structure in the retina, while many lesions are seen in the portion anterior to the ora serrata. When they occur, the tubercles frequently interrupt the choroid and the peri-choroidal space shows some proliferation of fibroblasts. The ciliary musculature is replaced and the ciliary processes are frequently transformed into bulbous masses by the tubercles. No significant changes are seen in the lens. The iris shows a prominence of some of the little vessels within it and occasionally over its anterior surface there are a few fibroblastic and mononuclear leucocytes. In the posterior part of the cornea beneath the Descemet's membrane, one encounters a closely packed aggregate of tubercles with a fair amount of fibrosis within them. Extending laterally from this there is usually a band of fibroblasts loosely attached and accompanied by interspersed mononuclear leucocytes. In the anterior part of the sclera and generally within the outer portions, there are mononuclear and especially polymorphonuclear leucocytes, both in and about the small vessels. Near the corneoscleral juncture the infiltration of mononuclear leucocytes is most prominent and is seen throughout all layers. The corneal epithelium is intact. Emulsified enlarged nodes cultured and injected into animals showed considerable numbers of hemolytic streptococci. Unfortunately, none of the material was injected into guinea pigs or cultured for acid-fast organisms and so we cannot completely exclude the possibility of tuberculosis. No acid-fast organisms were found in tissue sections.

The histologic findings indicate that the disease has been present for at least as long as suggested by the history. There is also some evidence that there may have been a recent exacerbation of this disease. One wonders as to the exact cause of the change. We would appreciate Dr. Gendel's comments on several aspects of this case. Could the injection of old tuberculin or of typhoid organisms have led to the exacerbation of the disease process in this case? There is always the question as to whether Boeck's sarcoidosis is a form of tuberculosis. Does the higher incidence of negative tuberculin in Boeck's sarcoidosis than in average population represent a negative correlation and thereby suggest that Boeck's sarcoid is really an atypical or anergic form of tuberculosis? Does the failure of afebrile response to an intravenous injection of typhoid organisms and the reaction to cocaine indicate some basic change in the immunity-sensitivity response of the individual? Lastly, another point of interest is that I do not believe that it is always possible to make a histologic distinction between tuberculosis and Boeck's sarcoidosis. This is especially true of the lymph nodes and the liver. Frequently the liver shows some miliary tubercles in the presence of tuberculosis elsewhere. They rarely show caseation necrosis unless the disease is rather fulminating. Furthermore, the lymph nodes in adults (those in re-infection tuberculosis) rarely show evidences of caseation necrosis. In pulmonary tuberculosis the lymph nodes of the superior-mediastinal and even supraclavicular areas often show the presence of tubercles such as we see in this case. The differentiation of Boeck's sarcoid from tuberculosis basically rests upon the absence of tubercle bacilli in the tissue sections, on animal inoculation or upon cultures. If tubercle bacilli are present the diagnosis is obvious; if the culture is negative it may be sarcoidosis. Certainly we do not understand the nature of the latter disease and it, unlike tuberculosis, remains a morphologic entity.

Concluding Statements by Dr. Gendel: I am glad that Dr. Jones brought out that the liver biopsy is of itself not diagnostic. Granulomas of the liver may be found in a variety of conditions. It is only when it is taken with the negative cultural data and with the clinical picture that either the liver biopsy or the lymph node findings can aid in establishing the diagnosis of sarcoidosis. In our procedure we usually take half of the node for cultural purposes and if possible also take half of the liver biopsy for cultural studies. I purposely have avoided entering into a discussion of the controversial problem of the etiology of sarcoidosis. However, I believe it would be of value to discuss the arguments for and against the tuberculous theory of the etiology. There would seem to be some necessity for the distinction in the light of the different response to cortisone as a possible therapeutic agent. I was more or less brought up on the idea that it was a non-caseating form of tuberculosis, but in the last seven years I have changed to the opinion that sarcoidosis is a separate disease. I might enumerate the arguments that are usually advanced that sarcoidosis is an atypical form of tuberculosis.

1. Cases diagnosed clinically as Boeck's sarcoidosis have tuberculosis at autopsy in about 25 per cent of the cases. This may or may not be a valid argument. Ewing pointed out years ago that an equal percentage of cases of Hodgkin's disease also died of tuberculosis. Tuberculosis, avian or otherwise, is no longer considered in the etiology of Hodgkin's disease. Three cases of sarcoidosis in our group came to autopsy and none had tuberculosis. Many patients with Boeck's sarcoidosis are suspected of having tuberculosis and are hospitalized as tuberculous patients and in sanitoria. They, therefore, have a much greater chance of contracting this disease.

2. It is stated that a negative tuberculin in Boeck's sarcoidosis argues for an anergic form of tuberculosis. This is even more peculiar when we consider that most Negroes with tuberculosis have a fairly severe form of the disease. It seems improbable that another group of Negroes have a much more mild form of disease and a negative tuberculin reaction.

3. It has a very high incidence in the Negroes who are also prone to have tuberculosis.

4. The pathologic changes are similar.

The arguments in favor of sarcoidosis being a separate disease entity from tuberculosis are:

1. Attempts to culture the nodes and the tissue have not yielded any acid-test organ-

isms. Animal inoculations have given similar negative results.

2. There is a difference in the organ involvement. In sarcoidosis there is involvement of the parotids, lachrymal glands, the myocardium and pituitary glands. In disseminated tuberculosis there is involvement of the serosal surfaces, such as the pericardium, pleura, peritoneum and the meninges.

3. The sarcoidosis fails to respond to streptomycin while tuberculosis does.

4. Cortisone is helpful in sarcoidosis but is apparently harmful in tuberculosis.

As for the question concerning the body reaction to typhoid vaccine, fever does occur in sarcoidosis in a significant number of cases. One of our cases had 102 to 105 F. temperature for several months. It is our experience that a negative tuberculin has been present in about 60 per cent of the cases, and in the literature about 60 to 80 per cent have had negative tuberculins.

The President's Page

FLORENCE NIGHTINGALE WOULD BE DISTURBED

DR. KELLY

May 14 is the birthday of the Lady with the Lamp — Florence Nightingale.

That fact is a reminder that nothing has been done about one point in The Tennessee Ten — our Program of Public Service. This point calls for collaboration with The Tennessee State Nurses Association in an all-out campaign to recruit nursing students.

The TSNA is now offering us an opportunity to join in a month-long drive to recruit high school graduates, and others, to train for this humanitarian work. It is proposed that the drive begin April 14 and end on Florence Nightingale's birthday. On that day, several cities in the nation will conduct premieres of a movie depicting the life of the Patron Saint of nurses.

No one will deny that we need more nurses, particularly private duty nurses, who have dwindled in number steadily for the past decade. The private duty Registered Nurse who will accept duty in a patient's home has almost become The Vanishing American. Of course, most people sick enough to need a private registered nurse should be in a hospital, but that is not always possible.

No one really knows exactly how many nurses we need from the training schools each year. One source says that 900 are needed each year in Tennessee and we know that our sixteen nurse training schools can accept only 700. So, along with the recruitment drive we should have some planning for expansion of admission quotas, just as American medical schools have expanded their admission quotas for freshmen by an average of 20 per cent in the past five years.

During the last year, the University of Tennessee has increased its admissions from 35 to 50 per cent per quarter.

It should not be too difficult to sell nursing as a career to high school students. It has many advantages to offer besides the sheer satisfaction of knowing that you are easing human suffering and helping people back to health. A specific plan of collaboration with the TSNA will be proposed by the Public Service Committee at the Knoxville convention of our Association. This is one of The Tennessee Ten points that deserves immediate attention and support of all our members.

One suggestion seems worthy of consideration. There is a national move afoot to shorten the three-year nursing course to two or two and one-half years. This would increase the production of nurses and probably attract many girls who, for financial or other reasons, turn aside from this career to shorter courses which prepare them for other work. A comprehensive, scientific course could easily be covered in two years. It is our hope that the leaders of the nursing profession in Tennessee will join the trend begun in New York and other states for a shortened training period.

As a tribute to this member of the medical team—the nurse—our Association certainly should actively join the 1952 recruitment drive.

Ernest G. Kelly

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MARCH, 1952

EDITORIAL

THE 1952 ANNUAL PROGRAM, A PROGRAM FOR THE G.P.

It has been said before on this page that the JOURNAL and the Annual Program of the Tennessee State Medical Association should represent, in the scientific field, a postgraduate function in the main for the general practitioner or family physician.

Therefore in 1952 the Committee on Scientific Work again sought the advice of the medical profession in the non-urban areas. Again as last year, a list of some fifteen subjects was presented for a poll to all county medical societies,—those of Shelby, Davidson, Hamilton and Knox Counties being excepted. Eight of the topics on your program appear then as the most favored ones by your poll. Your Committee chose the essayists to present these subjects. The remainder of the items on the scientific program were either planned by the committee,—the symposia—or were selected from papers offered by physicians in the state.

Every speaker has been urged to plan his presentation for the general practitioner so that he may take away something useful for his everyday practice.

CHAIRMAN OF THE COMMITTEE ON
SCIENTIFIC WORK

★

One item of The Tennessee Ten, The Public Service Plan, set forth two years ago, was to arrange for the care of the indigent and their hospitalization. This is the year to use our influence.—Editor.

THE INDIGENT MUST BE SERVED

Sixteen months ago the Public Service project of caring for the medically indigent in hospitals was placed squarely before Governor Gordon Browning. A delegation of doctors told the Governor of the acute need of a state-county plan of paying the hospital costs of the thousands of medically indigent Tennesseans.

The delegation assured the Governor that Tennessee physicians, those who are members of medical societies, certainly would continue their practice of never charging hospitalized indigent patients a cent for medical or surgical services. The Governor's reaction to the proposal that the State and counties pay indigents' hospital bills was expressed in these words:

"I consider this such a worth-while project that if the money were available in the treasury, I would divert it tomorrow so we could get this program started."

He suggested that we sponsor a bill to set up a State Commission on Study of the Medical Indigency Problem. This was done, the bill was passed, and that Commission has employed a director to make the statewide survey. The Director is Dr. Robert C. Berson (a native of Brownsville), who is experienced in making medical care surveys.

A preliminary survey made by your Public Service Committee indicated a great need for such a state-county plan. Hospitals are losing large sums each year caring for indigent patients for whom nobody pays one penny. Most of the Tennessee county governments are either indifferent or unable to pay hospital bills for the poor. Religious and civic groups help in small measure to share the load.

It is significant that all eight bills introduced in Congress for compulsory health insurance OMITTED any provision for hospitalization of the medically indigent citizens of this country. Yet they call it "humanitarian" legislation. So, if the federal government turns its back on the indigent sick, we are determined to take care of them on the state and local level. We want to apply the axiom that "charity begins at home."

Several other states have plans in operation for the indigent sick. Only three—Maryland, New Jersey and Washington—have plans that approach effective operation. The program proposed for Tennessee would differ from all others in one important respect. Tennessee physicians would not accept any fee for treating a hospitalized indigent. In the other states both doctors and dentists are paid small fees for their services.

There is the possibility that the Tennessee plan would differ in another respect. Several insurance companies are investigating the possibility of covering this type of risk—the medically indigent—under a hospital policy. Such a risk has never been written in this country but it is written successfully in Canada.

The important question usually asked by doctors is,—who will decide whether a person is medically indigent? This problem has been worked out effectively under the Maryland plan. Each county has a committee of ten citizens representing a cross section of professions, trades and industries. This tough—yet humanitarian—committee screens all applicants for free hospitalization under the medical indigency program. In Maryland, a new setup operated by the State Health Department and local medical societies has been able to screen out the malingerers, the deadbeats and the hypochondriacs.

The Study Commission will report to Governor Browning no later than October 1 this year. But this proposal MUST be presented to every candidate for the state legislature WHILE THEY ARE CAMPAIGNING. We need commitments from every one of them for support of an appropriation of several million dollars annually to finance this humanitarian service. It will not require any new tax, just an appropriation from the general treasury.

This project will be brought up at the Knoxville Annual Session of the Tennessee State Medical Association. May we count on your support?—L. W. EDWARDS, M.D., Chairman, Public Service Committee.

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THE ELECTROCARDIOGRAM

The discussion on "Diagnostic Procedures in Precordial Pain" appearing elsewhere in this issue suggests some comments on electrocardiography and its function in medical practice. We have followed its progress through much of the forty years since the introduction of the string galvanometer into clinical medicine. We have observed its application from the time when there were heated arguments as to the nature of certain of the deflections in the tracing, to the present when the electrocardiogram has been elevated by some doctors to an unwarranted level of diagnostic authority.

There is no gainsaying that it is a most valuable prognostic and diagnostic tool. However, the main difficulty in its use is to limit it to the position of being one item in the clinical picture of the individual patient. When the doctor or the medical student is ready to disregard the history and his physical findings and depend upon the electrocardiographic tracing, he is not only a poor clinician but is headed for trouble. The prominence of the electrocardiogram in the thinking of some was emphasized only two days ago when a fourth-year medical student told your editor that he "guessed" the diastolic murmur under discussion was not that of mitral stenosis because the EKG did not show right axis deviation. And only some weeks before that another fourth-year student surmised that a history suggestive of angina pectoris could not represent heart disease since the EKG "was all right." This is dangerous thinking.

As with all special technics, they are at the mercy of artifacts and misinterpretation,—mislabeled leads may lead to diagnoses of serious heart disease. The patient's build or constitution must be taken into consideration when speaking in terms of axis deviation, or right or left ventricular strain patterns. What may be a person's normal is at times misinterpreted as disease when the reader of the tracing does not know if this was from one of asthenic or of hypersthenic build. He must have this information.

Though one of the most valuable functions of the electrocardiogram is in the differential diagnosis of certain arrhythmias, even here it may occasionally be misleading. Congenital physiologic dysfunctions or drugs may lead to such changes. Final interpretation of a tracing may not be possible until it is known whether digitalis was or was not given at the time of the recording.

The other and possibly most important use of the EKG is its use in the confirmation of a diagnosis of myocardial infarction. Yet even here it must be used only in conjunction with the clinical picture as a whole. Every experienced clinician has had patients die from infarction with persistently normal tracings, even serial ones for some days before death. On the other hand, myocardial disease other than infarction may give rise to tracings suggestive of infarct.

It is the fact that the doctor does not realize that the electrocardiogram cannot measure myocardial reserve or function that leads to the unfortunate use of this valuable diagnostic aid.

A normal electrocardiogram in the patient with a history of angina pectoris too often gives doctor and thus patient a false sense of security. Every clinician of experience has had sudden cardiac deaths among his patients one or several days after normal electrocardiograms. On the other hand, ST segment or T wave changes, or evidence of an old infarct, or bundle branch block, or complete block do not mean that the patient should not go fishing, or play nine holes of golf, or go about his business. Only the *history* of his exercise tolerance can guide the doctor in his advice—not what squiggles appear in an EKG tracing. The psychic trauma done annually by the misuse of this valuable diagnostic tool must be immense. All of us in the practice of medicine meet constantly individuals who are living a life either of semi-invalidism or of constant dread, because of an electrocardiograpic interpretation of months or years before.

Every instructor must emphasize the use of the EKG only as a part of the over-all clinical picture,—usually second or third to the history. Every physician must likewise apply the electrocardiographic interpretation only as applied to the individual patient—his complaints, history and physical findings. Rarely is the electrocardiogram diagnostic in itself, rather it is only a portion of a clinical evaluation.

R. H. K.

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WHAT OF DOUBLE COVERAGE FOR SURGICAL BENEFITS?

At a recent meeting of your Prepaid Insurance Committee it was brought out that in a very few instances in which the insured had two policies, surgeons had demanded a greater fee than that agreed to under the Tennessee Plan. The surgeon's philosophy being that since the insured had an indemnity policy in addition to the one under the Tennessee Plan he, the surgeon, was entitled to some of this money. However, irrespective of the number of policies held by the insured under the Tennessee Plan, the participating physician is obligated to accept the fee schedule of the Plan for services, provided the insured is within eligible income limits.

The representatives of our insurance underwriters indicated that it is very uncommon for the insured to have more than one policy covering surgical fees. Occasionally the insured has had such a policy, then becomes employed in an industry which has insurance under the Tennessee Plan and thus is insured doubly for a time. More often the insured under the Tennessee Plan may have some additional coverage for accidents under an automobile insurance policy.

In any event double coverage is either fortuitous or represents thriftiness. If the surgeon mistakenly insists upon his "pound of flesh" in such occasional instances, the professional public relationship may be irreparably damaged thereby. Is it really worth while demanding those extra dollars to which the surgeon is not entitled under the Plan, and of which a fair proportion will need be sent to Washington?

R. H. K.

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Honor Roll

Contributors to Building Fund

(February)

T. G. Cranwell, M.D., Pikeville
L. E. Coolidge, M.D., Greeneville
J. M. King, M.D., Tullahoma
Joseph McCoin, M.D., Cleveland
Homer C. Ogle, M.D., Knoxville
Sam L. Raines, M.D., Memphis
Robert C. Robertson, M.D., Chattanooga
Daniel M. Thomas, M.D., Oak Ridge
John C. Thornton, Jr., M.D., Brownsville
M. H. Weathers, Jr., M.D., Loretto
Percy H. Wood, M.D., Memphis

DEATHS

Dr. Edward Dunbar Newell, retired Chattanooga surgeon who was co-founder of the Newell and Newell Sanitarium, now known as Newell Hospital, died at the hospital on February 13. Dr. Newell, a native of St. Joseph, Louisiana, came to Chattanooga in early 1908 with his cousin, Dr. Edward T. Newell, Sr., who was his partner in the founding of the Newell and Newell Sanitarium. Aged 79.

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Dr. Oliver Peery Walker, retired Memphis urologist, died at his home on February 7. Dr. Walker, who was 68, had completed 44 years of medical practice when he retired last summer.

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Dr. Roy A. Doty, former mayor of Rogersville, died of a heart seizure in a Greeneville hospital on February 19, 1952. Aged 66.

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Dr. James Louis Leitch Bibb, Chattanooga internist who had practiced medicine in Chattanooga for some 40 years, died February 17, 1952, of a coronary occlusion.

★

Dr. Joseph Marshall Lea, Knoxville, died February 22, 1952, of a heart seizure. Aged 75.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Scientific Program, Tennessee State Medical Association

Tuesday, April 8
Ballroom, Andrew Johnson Hotel
Knoxville

Morning Session

Safe Practices for the Part-Time Anesthetist
Robert H. Haralson, Jr., M.D., Maryville
To Discuss: Howard Ausherman, M.D., Chattanooga

Office Management of the Diabetic Patient
Philip K. Bondy, M.D., Emory University, Atlanta, Georgia

Pitfalls and Errors in the Practice of General Surgery
Charles C. Trabue, M.D., Nashville
To Discuss: Charles R. Zirkle, M.D., Knoxville

Value of X-Ray Examinations of the Chest in the Management of Cancer
Robert Connor Pendergrass, M.D., Americus, Georgia.

Afternoon Session

Symposium on Hypertension
Introduction: Joseph W. Johnson, Jr., M.D., Chattanooga
"Etiologic Factors in Hypertension," E. White Patton, M.D., Chattanooga
"Hypertension in Pediatric Practice," James G. Hughes, M.D., Memphis
"Medical Treatment of Hypertension," Thomas F. Frist, M.D., Nashville
"Surgical Treatment of Hypertension," Harwell Wilson, M.D., Memphis

Obstructions About the Bladder Neck
John Dougherty, M.D., Knoxville

To Discuss: Max K. Moulder, M.D., Nashville

Bronchiectasis: A Common Cause of Cough and Hemoptysis

David H. Waterman, M.D., Knoxville

To Discuss: Foster Hampton, Jr., M.D., Chattanooga

Wednesday, April 9

Morning Session

Convulsive Disorders in Childhood

William G. Crook, M.D., Jackson

To Discuss: Jack Chesney, M.D., Knoxville

Indications for Bone Marrow Examinations

Merlin L. Trumbull, M.D., and Miss E. A. Kelley (by invitation)

To Discuss: S. Fred Strain, M.D., Memphis

Management of Low Back Pain

Robert Brashear, M.D., Knoxville

To Discuss: Marcus J. Steward, M.D., Memphis

Office Treatment of Gynecological Disorders

Harry E. Jones, M.D., Chattanooga

To Discuss: Edwin Williams, M.D., Nashville

Management of the Anemias

John Foley Dee, M.D., Instructor in Postgraduate Instruction

Precordial Pain—Differential Diagnosis

R. B. Wood, M.D., Knoxville

To Discuss: Joseph E. Aker, Jr., Knoxville

Afternoon Session

Symposium on Peripheral Vascular Disease

Introduction: James A. Kirtley, Jr., M.D.

"Classification and Diagnostic Tests in Peripheral Vascular Diseases"

Phil B. Bleecker, M.D., Memphis

"Medical Management of Peripheral Vascular Diseases"

Addison B. Scoville, Jr., M.D., Nashville

"Treatment of Phlebothrombosis and Thrombophlebitis"

John Kesterson, M.D., Knoxville

"The Problem of Pulmonary Embolism; Evaluation of Caval Ligations"

Douglas H. Riddell, M.D., Nashville

"Arterial Embolism"

Parker D. Elrod, M.D., Nashville

"Surgical Procedures in Peripheral Vascular Lesions"

James A. Kirtley, Jr., M.D., Sam Y. Garrett, M.D., and Raymond Martin, M.D., Nashville

A Clinical Correlation of the Pathophysiology in Glomerulonephritis

David Scheinberg, M.D., Memphis

To Discuss: S. Fred Strain, M.D., Memphis

Brief Review of Therapeutic Measures During the Last 53 Years

J. T. Moore, Sr., M.D., Algood

To Discuss: John P. Sloan, M.D., Jamestown

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Tennessee Academy of General Practice

Monday, April 7, 1952

Ballroom, Andrew Johnson Hotel

Knoxville

Annual Banquet—6:30 p.m.

Address—R. B. Robbins, M.D., Camden, Ark. President, American Acadamy of General Practice

Business Session—Election of Officers

Officers of the Academy:

President—D. H. James, M.D., Memphis

Vice-Presidents—

G. D. LeQuire, M.D., Maryville

O. Reed Hill, M.D., Lebanon

Julian K. Welch, Jr., M.D., Brownsville

Secretary-Treasurer—D. J. Johns, M. D., Nashville

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Tennessee Radiological Society

Monday, April 7, 1952

Sky Line Room, Farragut Hotel

Knoxville

9:00 a.m. **Film Reading Contest**

Panelists:

Franklin B. Bogart, M.D., Chattanooga

Joseph Ivie, M.D., Nashville

J. Cash King, M.D., Memphis

(bring your films of difficult proven cases and try to stump the experts)

11:00 a.m. **Tumors of the Colon**
Robert C. Pendergrass, M.D., Americus, Ga.
12:00 Luncheon
1:45 p.m. **Golf Tournament**
(Members will participate in General Tournament)

Officers of the Society:
Walter D. Hamkins, M.D., Johnson City, President
J. E. Whiteleather, M.D., Memphis, Vice-President
J. Marsh Frere, M.D., Chattanooga, Secretary-Treasurer

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Tennessee Diabetes Association

Monday, April 7, 1942

Tennessee Room, Farragut Hotel
Knoxville

Does Diet Influence the Development of Diabetes?—Personal Observations in Africa
Phil B. Bleeker, M.D., Memphis

Glucose Administration in the Management of Diabetic Coma
Charles Sienknecht, M.D., Knoxville

Pregnancy in the Diabetic
Albert Weinstein, M.D., Nashville
Margaret Veller, M.D., Nashville

Insulin Mixtures
Julian Lentz, M.D., Maryville

Theoretical Considerations Concerning the Etiology of Diabetes Mellitus
Philip K. Bondy, M.D., Emory University, Atlanta

Evening Session

Annual Dinner, 6:30 P.M.

Guest Speaker—Philip K. Bondy, M.D.
Subject: **Treatment of Diabetic Acidosis**
Election of Officers:
President—William C. Crowder, M.D., Maryville
Vice-President — Cleo W. Stephenson, M.D., Memphis
Secretary-Treasurer — Albert Weinstein, M.D., Nashville

Tennessee Academy of Ophthalmology and Otolaryngology

Knoxville, April 7, 1952
Andrew Johnson Hotel

Registration: 8:00 A.M.
President: Dr. C. Fowler Hollabaugh
Nashville, Tennessee
Vice-President: Dr. R. Graham Fish
Paris, Tennessee
Secretary-Treasurer: Dr. Roland H. Myers
Memphis, Tennessee

Program—Rose Room

9:00 a.m. **Retrolental Fibroplasia**
Dr. Robert S. Leach and Dr. Jack Chesney, Knoxville
Discussor: Dr. John L. Montgomery, Knoxville

9:45 a.m. **New and Simplified Method of Treating Facial Fractures**
Dr. McCarthy DeMere, Memphis
Discussors: Dr. Harold Alper, Chattanooga
Dr. Joseph A. Buchignani, Memphis

10:30 a.m. **Histoplasmosis**
Dr. Wesley W. Wilkerson, Jr., Nashville
Discussors: Dr. Charles D. Blassingame, Memphis
Dr. Olan E. Ballou, Knoxville

11:15 a.m. **Argyrosis of Cornea (Case Report)**
Dr. James W. Wilkes, Resident in Ophthalmology, Memphis EENT Hospital
Discussors: Dr. Phil M. Lewis, Memphis
Dr. J. Wesley McKinney, Memphis

11:40 a.m. **Abscess of Cervical Vertebrae (Case Report)**
Dr. Charles D. Blassingame, Memphis
Discussors: Dr. Edwin W. Cocke, Memphis
Dr. Stewart Lawwill, Chattanooga

Luncheon—12:00 P.M.—Blue Room

Knoxville Society—Host

Afternoon Program

1:30 p.m. **Bilateral Occipital Lobe Infarction Simulating Retrobulbar Optic Neuritis: Report of Case Terminating Fatally While Using ACTH**

Dr. G. Allen Lawrence, Nashville

Discussors: Dr. John M. Wilson, Johnson City
Dr. Henry C. Smith, Nashville

2:15 p.m. **Salivary Gland Tumors as a Diagnostic Problem**

Dr. Edwin W. Cocke, Memphis

Discussors: Dr. James Prose, Dr. Ralph R. Braund, Memphis

3:00 p.m. **A Case of Pulsion Diverticulum of Upper Esophagus**

Dr. Lamar L. Knight, Knoxville

Discussors: Dr. William Kennon, Nashville
Dr. J. Mac Sams, Johnson City

3:30 p.m. **An Eye Case Report: Intra-Orbital Tumor**

Dr. Leon C. Hoskins, Knoxville

Discussors: Dr. I. L. Arnold, Chattanooga
Dr. Kate Zerfoss, Nashville

4:00 p.m. Business Session

5:00 p.m. Cocktail Party, Andrew Johnson Hotel, following the business meeting
Knoxville Society, Host

6:00 p.m. Dinner, Hotel Andrew Johnson, Dutch, Following Cocktail Party

Roland H. Myers, M.D., Sec.-Treas.
State Academy of Ophthalmology and Otolaryngology

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Tennessee Pediatric Society

April 7, 1952
Farragut Hotel, Knoxville

Clinical Program

1. Eight interesting case reports by regional members
2. Guest speakers:

   The Uses and Abuses of Chemotherapy

   Dr. Francis Schwentker, Professor of Pediatrics, Johns Hopkins Medical School, Baltimore, Maryland

   The Prevention and Management of Tetanus

   Dr. Gilbert Forbes, Professor of Pediatrics, Southwestern Medical School of the University of Texas, Dallas, Texas

Social Program

1. Sunday Night, April 6, 1952
   Cocktails and Buffet Supper—Courtesy local Pediatricians
2. Monday Night, April 7, 1952
   Cocktails and Banquet
3. Special Program for the ladies all day Monday

Oliver W. Hill, M.D., Sec. and Treas.
4807 Newcom Avenue
Knoxville, Tennessee

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Woman's Auxiliary to the Tennessee State Medical Association

April 7, 8, 9, 1952
Knoxville

Headquarters for the Auxiliary will be the Farragut Hotel. Registration will begin Monday at 10:00 a.m. in the lobby of the Farragut and will continue through Tuesday morning from 8:00 to 11:00 a.m.

The preconvention Board meeting and dinner are scheduled for Monday night at 7:00 p.m. in the Skyline Room.

The general meeting will be held Tuesday, April 8, at 9:00 a.m. in the Oak Room of the Farragut.

The annual luncheon will be held at the Holston Hills Country Club on Tuesday, April 8, at 1:00 p.m.

The time and place of the post-convention Board meeting will be announced during the sessions.

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Other Groups and Organizations Meeting Concurrently with State Association, Knoxville, April 7, 8, 9, 1952

- The Public Health Council
- The Postgraduate Committee
- Organizational Meeting for Tennessee Chapter of American College of Surgeons
- The Board of Trustees, Tennessee State Medical Association

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Obion and Dyer-Lake-Crockett Societies

Obion County Medical Society and Dyer-Lake-Crockett County Medical Societies met in joint session in Dyersburg on February 6. Dr. Jack R. Holifield of Tiptonville, 1952 president of the Dyer-Lake-Crockett Society, presided at the dinner meeting. Dr. W. C. Colbert of Memphis presented a paper on "Internal Medicine," and Dr. W. T. Black, also of Memphis, discussed "Endometriosis."

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Roane County Medical Society

Dr. H. Stratton Jones of Harriman was elected president of the Roane County Medical Society last month. Other officers are Dr. Dexter Davis, Oak Ridge, vice-president, and Dr. William P. Hardy, Oak Ridge, secretary-treasurer. Delegates to the Tennessee State Medical Association are Dr. Dana Nance, Oak Ridge, and Dr. T. L. Bowman, Harriman, alternate.

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Lawrence County Medical Society

At a meeting of the Lawrence County Medical Society on January 22, officers for 1952 were elected. Dr. Malcolm H. Weathers of Loretto was elected president, Dr. Thomas J. Stockard, Lawrenceburg, vice-president, and Dr. Villard Parrish, of Loretto, secretary.

Blount County Medical Society

Physicians in Blount County are members of a doctor exchange which was recently set up to enable citizens to get in touch with their doctor more readily.

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Nashville Academy of Medicine

At the meeting of January 22 the following program, "Newer Aspects of the Management of Hypertension," was presented by members of the Nashville Society for Internal Medicine, Dr. J. Owsley Manier presiding: — "Chemotherapeutic Agents" by Dr. Samuel Riven, "Current Status of Sympathectomy" by Dr. Cully Cobb and "The Effect of Adrenolectomy in Hypertension" by Dr. Ross Kory.

The February 5 meeting was presented by the Obstetricians and Gynecologists and presided over by Dr. Sam Cowan, Jr.:—"Common Gynecological Problems in Pediatrics" by Dr. Roy Parker, "Diabetes in Pregnancy" by Dr. Albert Weinstein, "Review of Cesarean Sections in Nashville" by Dr. Robert Patterson and "Menorrhagia" by Dr. Thomas Warder.

On February 19 the Academy had a dinner in the Vanderbilt University Hospital Cafeteria and heard case presentations and discussions on the following subjects:—"Renal Infections" by Doctors Joe Strayhorn and C. E. Haines, "Cardiac Surgery" by Dr. William Scott and "Chest Infections Resistant to Antibiotics" by Dr. E. B. Anderson.

The Academy's Board of Directors has unanimously endorsed a proposal of the city of Nashville to provide sewage disposal facilities for the capital city. In the directors' resolution it was stated that "Adequate sewerage is the number one public health problem in the community." The resolution committed the organization to "use every means at our command to promote and bring the project of adequate sewerage in our community to a successful realization."

Members of the Academy receive a regular newsletter from the Executive Secretary's office. The letter dated February 27, in a section entitled, "Report to the Membership," listed twenty Academy projects and activities which were undertaken and completed during 1951. This record of achievement is an enviable one and indicates the wide range of professional, public service, and public relations activities which a medical society of this size may successfully undertake. Accomplishments cited were:

(1) Expanded Academy headquarters as a medical information center and enlarged the Society's contacts with business, professional and civic agencies to promote better public relations. (3) Held special public service meetings for Academy members, their wives and other related groups. (3) Hosted physicians attending Tennessee State Medical Association Convention. (4) Expanded an actively functioning speakers bureau. (5) Established personnel placement service for the use of Academy members. (6) Published and distributed in Middle Tennessee the Academy's 1951-52 Program. (7) Sponsored the Fourth Annual Postgraduate Medical Assembly. (8) Established the Doctors Call Service for handling physicians' emergency calls under Academy direction. (9) Adopted and put into operation the Medical Press and Radio Publicity Code. (10) Put into working form the Health Service Division of Civilian Defense. (11) Established a courting membership covering physicians doing postgraduate work. (12) Assisted the Visiting Nurse Service in getting established. (13) Compiled a medical survey at the request of the Community Services Commission. (14) Conducted essay contests in Davidson County Schools. (15) Completed putting into operation the public service program adopted by the Academy. (16) Participated in Business-Education Day for city and county school teachers. (17) Sponsored medical exhibit at state fair and distributed over twenty thousand pieces of medical literature. (18) Consolidated and streamlined the administrative affairs of the Academy into better working order. (19) Endorsed fluoridation of public water supply. (20) Participated actively in civic campaigns for the Community Chest, Red Cross, and the Middle Tennessee Heart Association.

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Chattanooga-Hamilton County Medical Society

The Society was addressed recently by Dr. Tinsley Harrison of Birmingham, Alabama, and by Dr. Augustus McCravey and Mr. Ben Harris of the Tennessee Hospital Service Association. Mr. Harris discussed professional relations between Blue Cross and members of the medical profession.

The Society effectively stopped a bogus telephone "survey of sex habits" last month by stating publicly that the survey had no sanction whatever from the Society. The caller had represented himself as a researcher from the University of Illinois and claimed during the telephone interview that he was working in Chattanooga with the approval and endorsement of the Society. The Society's attention was called to the matter when several local physicians reported that their patients had inquired of them about the "survey."

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Montgomery County Medical Society

The Society ran the following paid advertisement in the *Clarksville Leaf-Chronicle* last month:

Help Your Doctor to Help You

The following list of suggestions is being published as a public service by the Montgomery County Medical Society in order (1) to facilitate your obtaining medical care and (2) to make your physician's time better available to both his patients and himself.

By helping the physicians to use their working time more efficiently, patients can be seen more promptly and more patients can be cared for.

(1) *Whenever possible, place your calls early in the day before office hours begin.*

(2) *Give all essential information about your case when you call.*

(3) *Except in cases of EMERGENCY, please do not call on Thursday and Sunday afternoons or holidays.*

(4) *For EMERGENCY cases, requiring hospital treatment, on these days, if your regular physician cannot be reached, a doctor is on call at the hospital.*

(5) *In case of serious injuries or accident, notify your regular physician and take patient to the hospital.*

(6) *Consult the yellow section of your phone book, where office, residence and alternate phone numbers are listed, if in doubt as to how to reach your physician.*

(7) *Whenever possible, see your physician at his office, rather than calling him to your home.*

(8) *Do not place calls with several physicians at once.*

(9) *A Doctor's Telephone Exchange is now in operation, to enable you to locate your physician when unable to reach him at home. This phone number is 7388.*

MONTGOMERY COUNTY MEDICAL SOCIETY

Dr. M. L. Shelby, a former president of the Society, said that the procedures set out above would go a long way in helping physicians render better service to their patients.

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Consolidated Medical Assembly of West Tennessee

The February 5 meeting of the Society was held in the New Southern Hotel. Significant actions taken included the appointment of Dr. John C. Pearce as Chairman of a committee to select the Assembly's candidate for the Outstanding General Practitioner Award to be conferred at the State Meeting in April. Dr. G. H. Berryhill discussed the need for a local speech and hearing center in Jackson as a division of the Tennessee Speech and Hearing Center with headquarters in Nashville. The Society voted to approve the establishment of the local center.

Dr. John R. Thompson, Jr., reported that representatives of the Assembly, along with physicians from Obion and Dyer Counties, had sponsored a recent meeting attended by hospital administrators, civic leaders, and physicians to hear Dr. H. H. Shoulders, Chairman of the State Association's Committee on Veterans Affairs, discuss the Tennessee proposal related to the VA's hospital and medical care program. Those attending endorsed the proposal and agreed to work for its successful culmination by securing support in local communities. The Society also established a Grievance Committee.

The scientific program consisted of a paper on "Fibrocystic Disease" by Dr. Fontain S. Hill of Memphis and a second paper, "Management of the Second Stage of Labor and Its Complications," by Dr. Henry B. Turner, also of Memphis.

Since the State Association has received many inquiries from local societies about the procedure for setting up grievance committees, the Assembly's by-law amendment creating its Grievance Committee and setting out its functions and duties is published verbatim, hoping that it may serve as a model for other societies:

"BE IT RESOLVED—that the by-laws of the Consolidated Medical Assembly of West Tennessee be amended and supplemented, so as to provide for a Grievance Committee, to be selected, the duties thereof, and the terms of office of the respective members thereof, to be as follows:

"CHAPTER IV
SECTION V

"That a Grievance Committee composed of three members be established as a permanent Standing Committee, for the purpose of reception and adjudication of grievances between the public and members of the Society, and between individual members of the Society.

"The Committee shall be composed of three members who shall be the last three past presidents of the Society, the senior past president serving as chairman. The first Committee shall be the three immediate past presidents of the Society, and the senior past president of the first Committee shall serve until the next annual election and qualification of the succeeding president: that the past president whose term of office expires next to the senior past president shall serve on the first Committee, until the second annual election hereafter, and that the immediate past president shall serve on the first Committee until the third annual election hereafter; thereafter the terms of office of each member of the Committee shall be for three years each, as from the date of their appointment to the Committee.

"In the event of a vacancy, the Acting President of the Consolidated Medical Assembly shall fill the vacancy by appointment from among the members of the Society, to serve until the next ensuing annual election.

"All grievance matters coming before the Committee shall be considered and determined by the full Committee, and the Committee shall refer its full report and recommendation to the Officers of the Society and furnish a copy to the Grievance Committee of the Tennessee State Medical Association."

Adopted February 5, 1952.

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Knoxville Academy of Medicine

At the February 5 meeting of the Academy Dr. W. Forrest Powell read a paper on "Operative Course of Digitalized Surgical Patients." At the February 19 meeting a colored film prepared by Dr. Glenn Potter of Los Angeles was shown. This was a film on anesthesiology and its relationship to surgery of the brain, nose and throat.

Dr. R. H. Monger, Secretary, reported that as of this date 120 members had paid their $10.00 voluntary contribution to defray the expenses of the Academy's role as the host society to the Tennessee State Medical Association's meeting in Knoxville April 7-9, 1952.

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Hamblen County Medical Society

The Society held its regular monthly meeting on February 19 with Dr. Herschell Penn of Knoxville delivering a lecture and demonstration on the use of the intramedullary pins in the reduction and fixation of certain types of bone fracture.

The Society has appointed an Advisory Committee which will offer to the Morristown-Hamblen Hospital Association cooperation, consultation and advice in the construction and maintaining of a general hospital in Morristown. Dr. Sullenberger is Committee Chairman; the other members are Doctors R. A. Purvis, James W. Davis and Y. A. Jackson.

The Society also elected a Grievance Committee. A newspaper article stated that the purpose of this Committee is to hear and act upon any grievance brought by any person against any member of the local Medical Society. It also is to draft a schedule of fees by which the members of this Society will abide.

A committee was also named to promote the Society's candidate for the Outstanding General Practitioner Award to be conferred by the State Medical Association in Knoxville at the April meeting.

NATIONAL NEWS

Hospitalization for 1951

In its report to Congress the Veterans Administration reported, for the fiscal year 1951, the following data concerning hospitalization:

Illness	*Service Connected*	*Non-Service Connected*	*Average Stay Calendar 1950*	*Cost per Patient per Day*	
				1951	*Increase Over 1950*
All patients	35.0%	65.0%	60.8 days	$11.66	7.0%
TB	41.5%	58.5%	205.8 days	13.82	1.5%
Psychosis	51.0%	49.0%	482.1 days	7.22	4.5%
Other NP	24.5%	75.5%	60.3 days	7.22	4.5%
General M&S	12.2%	87.8%	30.8 days	16.47	9.2%

Veterans Administration

Dr. E. H. Cushing, Assistant Chief Medical Director for Research, has resigned, apparently because of differences with the Department of Medicine and Surgery of the Veterans Administration.

★

Draft of Doctors

The pool of Priority I reserves is almost exhausted. Unless the group of physically fit, non-essential 1,000 or so left in this category do not join the reserves, the Draft Law of the Eighty-First Congress will need to be invoked by about April. The Defense Department has asked Selective Service for 335 dentists during April on a similar basis.

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

A quarter century of growth has shown an increase in medical students from 393 to 1,756 in 1950, a gain of 346.8 per cent.

Twenty-five years ago the Medical Units had 23 full-time members on the teaching staff and 160 part-time personnel. In 1950 there were 67 full-time and 312 part-time instructors. Most of the part-time teaching is done by Memphis physicians who donate their services in bedside teaching on patients in John Gaston Hospital.

The number of patients visiting the Out-Patient Department of John Gaston Hospital was 34,414 in 1950 as compared to 18,504 in 1925. The old General Hospital in 1925 had only 287 beds as against 566 for John Gaston Hospital. The number of babies born at the hospital also has taken a leap. Twenty-five years ago there were only 623 births, while in 1950 there were 4,029.

During the twenty-five-year period, the

number of volumes in the library has increased from 5,000 to 40,504. The number of buildings has grown from four to fifteen.

★

Postgraduate Circuit News

By the time this is in print, the third circuit in Medicine, offered by Dr. John F. Dee, will be finished in the centers of Shelbyville, Winchester, Lebanon, Murfreesboro and Meharry Medical College. The district has 102 doctors taking the course. Dr. Dee states that the free and private consultations have really kept him busy.

Scores of physicians have written, through the questionnaires following the close of the courses in the districts, insisting that the Committee repeat the program and most of the past subjects that have been offered. Many argue that the numerous changes affecting all branches, such as obstetrics, pediatrics, gynecology, etc., have been affected by antibiotic drug therapy and other new developments in diagnosis and treatment.

There are also some six hundred physicians in practice in Tennessee since World War II who were not in practice when the previous courses were offered. Many doctors frankly tell us they make their vacation plans to avoid the necessity of absence when these courses are scheduled in their communities. Still others declare they cannot get away or leave their practice for extensive courses or trips to medical meetings other than in their own county.

The next circuit, number four, will open the week of March 31 in the centers of Kingsport, Bristol, Johnson City, Greeneville and Elizabethton. Dr. Dee will recess instruction during the week of the State Medical Association meeting, where Dr. Dee will be one of the speakers. Registrations are already coming in for circuit four. Mr. George Cummings, the new Field Director, will visit the territory immediately to complete registrations by solicitation and make final arrangements for the meetings.

The exhibit this year at the State meeting will be an electrical design by Mr. Cummings and all should see it in the Postgraduate booth.

PERSONAL NEWS

Dr. Jesse C. Hill, Knoxville, holds many enviable records of faithful attendance and loyalty to his various organizations. He has not missed a meeting of the Knoxville Academy in 13 years; has missed 2 in the past 25 years; and has missed only 6 in the past 36 years. During this period he served as Secretary of the Academy for 23 years, as President for one year, and on the Judicial Council for 5 years, for a total of 29 years of elected offices. He has not missed a single staff meeting at the Knoxville General Hospital during his 17 years of membership. He has a record of 13 years of staff attendance at Fort Sanders without an absence, and during 14 years of staff membership at St. Mary's Hospital he has missed only 6 meetings.

Dr. J. B. Naive, Medical Director of the Beverly Hills Sanitarium and President of the Knoxville Academy of Medicine, spoke to the Medical Assistants' Association on February 4.

Dr. Robert M. Foote, Director of the Tennessee Department of Public Health, spoke at East Nashville High School on February 18. His subject was "Mental Health."

Dr. John H. Burkhart of Knoxville spoke to the Rotary Club February 5 on the subject of heart diseases.

Dr. Richter H. Wiggall spoke on diseases of the skin before a meeting of the Society of Medical Technicians on February 13.

Dr. Pope B. Holliday, Chattanooga physician, was notified last month that he has passed the American Board of Pediatrics' examination.

Dr. Alfred D. Mason, Memphis urologist, is the new president of the medical staff of Methodist Hospital. He succeeds **Dr. Battle Malone. Dr. Joseph H. Francis,** general surgeon, was elected to serve his fourth term as chief of staff. **Dr. C. Ferrell Varner** was re-elected secretary. New members of the Executive Committee are **Dr. James M. Bethea** and **Dr. Robin F. Mason.**

Dr. Joe Killebrew, Chattanooga, has been urged by many of his friends to make the race for Congress in the Third Congressional District. Dr. Killebrew said that much of his support was outside the medical profession. His aggressive compaigning in the Chattanooga city election resulted in his being elected to the Council for his first public office.

Dr. C. E. Perry, McMinnville, was chosen "McMinnville's Young Man of the Year" by the Junior Chamber of Commerce. Incidentally, **Dr. Paul H. Goodman** received the same award last year. The reward cited Dr. Perry for "distinguished service to the religious, civic, and business life of his city."

Dr. Lloyd S. Nease, Newport, was named President-Elect of the Mid-South Postgraduate Medical Assembly in Memphis last month. **Dr. Dewey Peters** of Knoxville was elected one of the Regional Vice-Presidents.

Dr. J. C. Lowe of Cleveland addressed the Woman's Club of his city last month on the subject, "Science on the March."

Dr. Paul Wylie of Jackson was scheduled to address the Jackson Society of Medical and X-Ray Technicians last month on "New Techniques in Gallbladder X-Ray."

Dr. William A. Garrott, Cleveland, was named Chairman of the Medical Advisory Committee for the Bradley County Red Cross Chapter's new "Defense Blood" program.

WOMAN'S AUXILIARY

REPORT OF NATIONAL FALL CONFERENCE:

I wish that every doctor's wife in Tennessee might have attended the Fall Conference of National Chairmen, State Presidents and Presidents-elect, held November 14th and 15th in Chicago. It was truly inspirational. In this small space, I can only touch on the high points of the panel discussions, and I urge you to read more of this in the December issue of our National Bulletin. I also recommend to you and your husbands the talks made by our conference speakers—Congressman Walter Judd, M.D., and Mr. Edward H. O'Connor. They were both splendid discourses against the welfare state. Mr. O'Connor cited the fact that Atlee admitted only one-third of the British population had profited from the socialistic system and reminded us that to accomplish this the strength of the nation had been sacrificed. Doctor Judd emphasized the thought that whenever a nation or a parent does for its people or its children something that they have the capacity to do for themselves, it destroys both initiative and incentive. But every sentence of these messages was so thought-provoking that I hope not one of you fails to read them as they are published in the Bulletin. If you aren't already a subscriber, won't you give your dollar immediately to the proper person so that you may receive the next issue? These two talks alone are worth many times the subscription price.

Our National organization is aiming for 10,000 new members this year. How many of these can be found in your community? With another election year ahead we need every doctor's wife to be informed and take her place in shaping the future destiny of our nation. And once they have become members of our organization, it is our duty to make them see how important their membership can be. As was mentioned by one of our National Chairmen: "He who would kindle a fire in others must himself glow."

Our panel discussions brought out that Program, Public Relations and Community Service are closely related. We are urged to invite representatives from other organizations when we have on our programs a message that they should hear. We must be active in any voluntary health organizations and stimulate interest of lay people in Health Councils, Community Health Days, and Rural Health programs. Through inter-group relationships we can multiply our influence many times.

Our Civil Defense program is new, but you will hear much of it during the next months. Helping in the Nurse Recruitment Program is not new but it is closely related with Civil Defense and is more vital than ever with the dangers of chemical and biological warfare increasing each day. Our whole-hearted support of and cooperation with the Blood Donor program is another aim worthy of our most earnest efforts.

I have not scratched the surface of the wealth of ideas brought out by leaders from forty-seven of our forty-eight state organizations, but I do hope that I have aroused your interest so that you will read the more complete details in your National Bulletin.

—Mrs. Lynch D. Bennett

TRI COUNTY UPS DUES FOR NURSING SCHOLARSHIP

The Tri County Auxiliary has increased its annual dues from \$3.00 to \$5.00 to provide funds to finance a scholarship for a nursing student.

Mrs. Dillard M. Sholes of Elizabethton reports that the Auxiliary also contributed to the fund for college assistance to Altha Jane Turner, winner of last year's Essay Contest.

One Committee worked hard on the current essay contest in schools of the Tri County area and another plugged for increased subscriptions to the Bulletin and to Today's Health.

The Auxiliary conducted some interesting and effective monthly programs, including one featuring as the speaker Mrs. Bennett, State Auxiliary President.

THREE PROJECTS FOR BLOUNT AUXILIARY

Mrs. M. A. Carnes reports that the Blount County Auxiliary has pushed three projects:

1. Sponsorship of a scholarship for a nursing school student. The money was earned mainly by an all out sales campaign for Today's Health. Each member subscribed twice, once for the home and once for the doctor's office. A free subscription was given to every Blount County school which had bought one. Doctors gave a subscription to each P.-T.A. president.

2. A "fish pond" is furnished each year for the local Hospital Auxiliary Bazaar.

3. The Blount Auxiliary decorates the holiday trays served to patients in the Maryville Hospital.

SOLID PROJECTS BY MEMPHIS AUXILIARY

A list of impressive accomplishments by the Auxiliary to the Memphis and Shelby County Medical Society is reported here by Mrs. Charles J. Deere.

The November meeting each year is an open house session devoted to Public Relations. Presidents or representatives of other women's clubs are invited to this meeting and a speaker is chosen for appeal to laymen.

The Auxiliary has a student loan fund held in trust and guaranteed by the Trustees of the University of Tennessee. Medical students in need of financial aid to complete their education may borrow at a low interest rate.

The Auxiliary was instrumental in establishing a practical nursing school. Applicants are trained six months in the school and six months in a hospital. They are required to pay only \$1.00 registration fee and supply uniforms.

The Essay Contest was pushed consistently throughout the Memphis and Shelby School system. The medical society donated cash prizes of one hundred dollars, fifty dollars and twenty-five dollars.

All community projects dealing with health finds the Auxiliary actively participating. Mrs. Carrol C. Turner planned and conducted a special health panel meeting of the Memphis Community Council.

The Maternal Welfare League, working to reduce the maternal death rate, is actively supported by the Auxiliary. The League last year placed a blood bank refrigerator in the city and county hospital to make blood more readily available to the delivery room.

Our tuberculosis chairman provides workers for a Christmas seal sale booth during the holiday season. We also are active in the cancer drive each year.

Our Christmas project was providing

gifts and necessities for a family of six, the children ranging from 19 months to 15 years. Clothing included a suit for the father. The family was so deserving and appreciative that the Auxiliary has "adopted" it and will continue help throughout 1952.

The respective chairmen have been pushing hard for increased circulation of the Bulletin and Today's Health.

The December meeting featured as guest speaker Mrs. Lawrence Megel from the Story Tellers League, whose selection was "Lady, You Must Be Awful Rich."

A Benevolent Fund, for doctors and their families in emergencies and for educational needs, is built from memorials during the year.

Active participation in Red Cross projects and in the Better Films Council are two other Auxiliary activities.

KNOX AUXILIARY IMPROVES HOSPITAL

The Auxiliary to the Knoxville Academy of Medicine provides drapes for wards two and three in General Hospital and this prompted the city to order a complete new paint job for the institution.

Mrs. Joe S. Reynolds reports plans to add drapes to wards four and five this year.

In December a coffee was given for freshman nurses in General Hospital.

Sixty-seven gowns were made by Auxiliary members for children patients in General Hospital.

A special meeting honoring new members provided a 1952 send-off in January. Mrs. Glenn Grubb was Chairman for the day, and Mrs. W. W. Potter gave an interesting history of the past year's work.

An important annual project is "Community Day" which brings in as special guest the leaders of all women's organizations in the city. There is evidence that these meetings are promoting a better understanding between the laity and the medical profession.

GREENE AUXILIARY AIDS RED CROSS

The Auxiliary in Greene County is young in years, but solid in service.

Members have assisted several times the work of the bloodmobile and have helped the Red Cross training school.

Mrs. Lynch Bennett, State Auxiliary President, spoke to the November meeting at the home of Mrs. L. E. Dyer, local President.

A subscription drive was conducted for Today's Health, and Auxiliary members have given assistance to the local Civil Defense Unit.

NEW FIVE COUNTY AUXILIARY BUSY

The Five County Auxiliary has concentrated on pertinent and effective programs for bi-monthly meetings.

Meeting subjects have included Public Service and Legislation concerning the health and welfare of the people.

Special emphasis has been placed on promotion of the Essay Contest throughout the school system of the Five County territory. Mrs. T. M. Crain of Monterey reports that the Auxiliary expects to lend any assistance needed to the Five County Medical Society.

WEST TENNESSEE AUXILIARY REPORTS

The far-flung (fifteen county) area embraced by the Woman's Auxiliary to the West Tennessee Consolidated Assembly has no effect on the excellent attendance, high moral and solid accomplishments of this Auxiliary.

Mrs. G. H. Berryhill of Jackson reports an ever increasing membership and heavy attendance for this Auxiliary.

The Auxiliary is financing a nurse now attending Baptist Hospital Training School in Memphis. She replaced another student financed through training school by the Auxiliary. The scholarship is an outright gift, not a loan.

The March meeting will be devoted to

Public Relations. The speaker is Ed L. Bridges, Public Service Director of the Tennessee State Medical Association.

FINE RECORD FOR CHATTANOOGA AUXILIARY

The Woman's Auxiliary to the Chattanooga and Hamilton County Medical Society has rendered excellent assistance to both the public and the medical profession during the current Auxiliary year.

A benefit bridge raised enough cash for purchase of a two hundred fifty dollar incubator for the maternity ward of Memorial Hospital.

The Auxiliary also contributed $50.00 for the cerebral palsy school fund and $30.00 to the Altha Jane Turner college fund.

A new gas stove was given by the Auxiliary to the Nurses home at Erlanger hospital.

Last calendar year 35 members worked a total of 400 hours in the medical library of the Society. This year this project is being continued and doctors' wives are staffing the library four hours daily, five days a week.

A Speaker's Bureau is maintained and the Auxiliary did some fine promotional work for the Essay Contest.

Arrangements for registration and for dinners given for doctors' secretaries during a Public Relations Course were handled by Mrs. J. Culpepper Brooks, Jr., Auxiliary President; Mrs. H. D. Hickey, Mrs. Augustus McCravey and Mrs. Clarence Landham.

NASHVILLE AUXILIARY PLANS OPEN HOUSE

A special Open House meeting with wives of laymen the honor guests was held on March 7, Richland Golf Club, by the Woman's Auxiliary to the Nashville Academy of Medicine and Davidson County Medical Society.

Guest speaker was Mrs. Kris Peterson, Administrative Assistant, Department of Public Relations, American Medical Association, Chicago. Mrs. Peterson has a solid store of knowledge of the contributions made by women to American medical care. She also has a special know-how in assisting with Woman's Auxiliary projects throughout the country.

The 11:30 A.M. meeting was followed by a Dutch Luncheon at $1.75 a plate. Those invited included representatives of every woman's organization in Nashville. The Tennessee State Nurses Association, the Nashville Dental and Drug Auxiliaries, officials of the State Auxiliary, and doctors' wives from a large area of the state.

The Nashville Auxiliary this year concentrated on programs pertinent to the various facets of medical care.

One meeting brought in a special speaker on Civil Defense. The Auxiliary has a Civil Defense Chairman, Mrs. Clarence S. Thomas.

A team of physicians' wives distributed plastic hearts for coin collection during the

State Convention

Knoxville

April 7-8-9

BUSINESS

EDUCATION

RECREATION

Have You Made Your Hotel Reservations?

Mrs. Peterson

campaign fund drive of the Middle Tennessee Heart Association.

Auxiliary members sew and roll bandages once each week in General Hospital.

A magazine cart for hospital patients is circulated among the wards in the Nashville hospitals.

The Auxiliary entertains husbands at a party in February and a picnic in June.

BOOK REVIEW

The Life of Peter Fayssoux of Charleston, South Carolina, by Chalmers G. Davidson, Columbia, S. C., 1950. Published by The Medical Association of South Carolina, 150 pages.

This is a delightful little biography of a Charlestonian physician who lived from 1745-1795. He came from a Huguenot family which had migrated to South Carolina. Peter Fayssoux's father was a baker who lived comfortably and sent his son to study "Physic" in Edinburgh University. A classmate was Benjamin Rush, later to be the outstanding American physician of his time in Philadelphia. These two Americans became good friends and, as the biography shows, carried on correspondence all during the remainder of Fayssoux's life.

Fayssoux's experiences as a doctor with the Continental Army during the Revolutionary War, for a time a captive of the British, led him to be an ardent patriot and inspired a hatred for the enemy. The sidelights on medical practice and descriptions of epidemics are most interesting.

After the Revolution Fayssoux gave much time and energy as a public-minded citizen taking part in the state legislative body and the South Carolina Convention to ratify the Constitution of the United States. He was opposed to the federalist type of instrument wishing more checks, balances and state's rights. However, after defeat he devoted his energies to accomplish solidarity among Carolinians for the Constitution.

He at his death was the outstanding physician of Charleston. He was president for the first three terms of the local medical society which he and a few friends organized in 1789. He, then, with this group set up the first free "Dispensary" in Charleston for the poor.

Anyone interested in the life of a patriotic, broad-minded doctor in Charleston, South Carolina, in the days before, during and after the American Revolution will find this little book both entertaining and informative.

R. H. K.

*

First Annual Report on Stress, by Hans Selye, M.D., Montreal. Acta, Inc., 1951. 511 pages. Price $10.00.

Selye, the exponent of the concept of physiologic and pathologic changes in the living organism upon exposure to stress, has published this volume as a supplement to his work "Stress." As such it represents a most complete and detailed review of the literature which bears upon the subject. Naturally, with the rapidly accumulating writings on ACTH and cortisone, this represents a wide survey.

He reviews the pros and cons of the stress concept and with this the stressor agents and the adaptive hormones, ACTH and cortisone. The second part of the book reviews the physiology and pathology of stress with consideration of the metabolism of glucose, lipids, nitrogen and electrolytes. This section also covers the pathologic changes occurring in the endocrine glands during stress. This leads into a review of what is being learned in the "adaptation diseases" of the skeletal, hemapoietic cardiovascular, respiratory, nervous, gastrointestinal, cutaneous and reticulo-endothelial systems. Here of course are included the allergies, collagen diseases and many others.

For the student of these many diseases, the relationship to cortisone and ACTH, the experimental as well as the practical, this volume is a storehouse of reference material. As indicated before, the bibliographic references are detailed and complete. Many charts and other illustrations are included. The main objection to the composition is the extensive use of abbreviations which necessitate constant reference to the glossary and interferes, at least for the reviewer, with the train of thought.

The author, in his concept, makes the clinician think of disease in new light.

R. H. K.

LOCATION WANTED

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself:

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

★

A recent letter received in this office requested that the following announcement be inserted:

"Locum tenens wanted. Twenty-eight-year-old graduate of the University of Tennessee, now finishing first year of surgical residency desires temporary position from April 1 to July 1. Trained in surgery and anesthesia. Would like to earn enough to continue residency. Has car and Tennessee license. Will travel."

LW-7

★

A physician desiring a location in Tennessee writes as follows:

"I am 31, married, with three children, a native of Kentucky even though born in Chattanooga, and had 41 months of service in the Marine Air Corps during World War II. I graduated from Washington University in St. Louis in 1950 and served a rotating internship at St. Louis City Hospital from July 1, 1950, to July 1, 1951. At present I am taking a rotating residency at the charity hospital here in Monroe, Louisiana. The training here has a very large surgical component. My year here will be up June 30 and I will want to go into practice immediately thereafter."

LW-8

★

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

★

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

★

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

★

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least

10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

ANNOUNCEMENTS

Dr. W. N. Carpenter has become associated with Doctors **M. A. Blanton, Sr.**, **M. A. Blanton, Jr.**, and **Byron O. Gardner** in the practice of medicine and surgery in Union City.

Dr. Earl R. Beets has opened an office in Jefferson City for the practice of medicine. Dr. Beets is a native of Clinton and was graduated from the University of Tennessee Medical School.

Dr. Rufus Morgan, a native of Chattanooga, has opened an office in the Bledsoe Memorial Hospital in Pikeville for the practice of medicine.

Dr. John R. Sisk has begun the practice of medicine in Harriman. Dr. Sisk, formerly of Trenton, Tennessee, is a graduate of the University of Tennessee Medical School.

Dr. Lee C. Harris, Sr., of Lawrenceburg, announces the change of the Harris Clinic from Gaines and Locust to its new location on the corner of Deller and Mahr. The new clinic is modern in every detail and equipped with X-ray and laboratory facilities. Dr. Harris is beginning his thirty-sixth year of medical practice in Lawrence County.

Dr. Denton D. Norris moved from Jamestown to Livingston early this year. He occupies the offices in Livingston formerly occupied by Dr. W. M. Breeding. Dr. Norris is a member of the 1950 class of the School of Medicine of the University of Tennessee.

Dr. D. L. Brint held open house at the new Brint Hospital in Bolivar last month. The hospital is located at the corner of Water and Jefferson Streets and is a modern brick and semi-fireproof building consisting of two stories and a large basement. There are ten hospital rooms, eight for white and two for colored patients.

Postgraduate Training for the General Practitioner at U. T.

Arrangements are now being completed to accept one physician at a time into the Section on General Practice. These appointments may be for varying times with a minimum of one week with 59 hours of postgraduate work, to a maximum of one month with over 200 hours.

There will be no rigid schedule, but afternoons will be spent in active teaching in the General Practice Clinics. There will be time during some of the afternoons for attending various conferences of the medical center. Mornings will be devoted to the department chosen in advance by the trainee. Evenings will be devoted to the department chosen in advance by the trainee. Evenings will be spent in active work in the admitting and emergency rooms of the medical center which are conducted under the supervision of the G. P. Staff.

This program is set up in such a way that the trainee may expect to do active work in the department of his choice as well as observing the more advanced work that is done by the staff of visiting specialists. In the Departments of Obstetrics, Medicine and Surgery, the practitioner's training will not consist entirely of lectures and demonstration ward rounds, but each man will be allowed active participation at approximately the resident level. In addition, experience will be obtained in the actual clinical teaching of medical students through the General Practice Clinics. Arrangements have now been made for training in general surgery or one of the surgical specialties, in general medicine or one of the medical specialties, in obstetrics, gynecology, pediatrics, X-ray and tuberculosis.

There will be no fee for the course. The only requirement will be that the applicant be a reputable physician currently engaged in general practice. Details of each man's proposed work will be arranged by correspondence before he comes to the University.

Suitable recognition will be given those who complete their proposed work. Those who desire to make arrangements for such a course should write to the General Practice Office, University of Tennessee, Memphis, Tennessee, indicating the work they would like to do and the time available.

* * *

American Academy of Forensic Sciences

The Fourth Annual Meeting will be held March 6, 7 and 8, 1952, at the Biltmore Hotel, Atlanta, Georgia. There will be General Sessions meeting and special section meetings on Forensic Pathology, Forensic Toxicology and Forensic Psychiatry. All those interested are urged to attend these meetings. Professor Ralph Turner, Michigan State College, East Lansing, Michigan, is secretary.

Diagnosis and Treatment of Malignant Disease

On April 3, 4 and 5, 1952, the Frank E. Bunts Institute and the Cleveland Clinic Foundation will present a continuation course for physicians on this subject. Dr. Freddy Homburger, Research Professor of Medicine, Tufts College Medical School, Boston, will give the evening lecture on April 4. The other guest speakers will be Dr. Allan C. Barnes, Professor of Obstetrics and Gynecology and Chairman of the Department, Ohio State University, College of Medicine; Dr. Brown M. Dobyns, Associate Professor of Surgery, Western Reserve University School of Medicine, Cleveland; and Dr. Thomas D. Kinney, Director of Laboratories, Cleveland City Hospital, and Professor of Pathology, Western Reserve University School of Medicine, Cleveland.

Inquiries regarding the complete program and registration may be addressed to the Frank E. Bunts Educational Institute, 2020 East Ninety-Third Street, Cleveland 6, Ohio.

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R. L. Sanders, Memphis (1954)

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MEDICINE'S PLACE IN SOCIETY

President-Elect's Address,

Tennessee State Medical Association, One Hundred and Seventeenth Annual Session

DAUGH W. SMITH, M.D., Nashville, Tenn.

It is with deep appreciation and humility that I accept the Presidency of a State Medical Association which I believe is going to set a national pattern in service to the people. The establishment of this pattern is not going to be an overnight job. We have been at it in earnest now only two years—since our Public Service Program was begun. Doctors by nature and training move with caution and prudence.

I pledge you my best efforts to meet the challenge you have laid down for me as your next President. I am following men whose records provide a stimulus for the job. I intend to borrow from their best works and ask their advice when it will help me to advance our program. For, every man is a composite of the good, or the bad, of those whose lives touch his own.

Tennessee is the only state in which the medical profession calls its public relations program a Public Service Program. We have been asked why this is so. It is so because we sincerely feel that it is *public service* and not a program of propaganda. A positive program of service does not require a barrage of propaganda. It must mean more service to our patients, to the public as citizenship, to our societies as active membership. I repeat for emphasis, our program is one of performance, not a program of publicity.

This is not a night for boasting. Instead, it is one on which we of the medical profession accept a challenge. That challenge is one of leadership. Who knows better the social and economic problems relating to medicine than the medical profession? No one! Then it is our moral and social obligation to furnish the leadership to aid in bringing about the indicated adjustments and improvements, that might be related to medicine.

The distinguished speaker who will follow me will discuss some of the problems facing American medicine. I propose to discuss some of the problems which exist here in our own state.

Many of the problems are peculiar to the individual states and must be solved by the various states.

Doctors are entitled to remuneration for the services they render, yet any man endowed with the talent of being a true physician has NO right to commercialize that talent. By the same token the person who is able to pay has no right to free services. There is no method by which the value of good medical service can be appraised.

A standard of fees is recognized as essential. But to maintain a standard of fees which is prohibitive to low income groups is neither morally or economically just. The quality of service should be the same for all. The cost for that service should be in relation to the advice rendered and the individual's ability to pay. Such practice is not only a sound public policy but a basic requirement of our Code of Ethics. To do one whit less is a gross violation of the Hippocratic Oath.

May I say here that we are well aware of the fact that there is a sufficient number of physicians in this state and in the nation, who charge excessive fees, to cause the public to blame the entire profession. You will find that true of any group which renders a public service. But that is no reason why the medical profession should tolerate its small percentage of fee gougers.

These men are being dealt with through recently activated, or re-activated, grievance committees. Most Tennessee Societies have such committees. The grievance committees are not just for the doctors. Their chief function is to receive complaints by the public seeking redress or adjustment for a justified cause. We invite the public to make use of these committees if and when the occasion arises.

The medical profession in Tennessee last year through its efforts to protect the public and its standards, expelled six physicians from their medical societies.

There should be no mystery regarding fees for services rendered. I grant you it is not always possible to make an accurate estimate. By the same token, the possibilities can be discussed with the patient in order that he might have some idea of the total expense. Then let us respect his business intellect by discussing the cost of medical care. A large percentage of patients want to pay reasonable amounts to their doctors for services.

Today many families are forced to budget all their earnings and so are many doctors. It is necessary and only proper that doctors assist their patients in this regard. The success of any practice demands that every doctor discuss with his patients the social and economic problems incident to illness.

If I had but one prayer for present and future medicine it would be that those who teach and those who are taught should never allow the influence of the economic side to enter into the plan of treatment.

We need to explain to the public, carefully and fairly, the costs of medical care. The U. S. Bureau of Labor statistics reveals that each year the American people spend about three cents out of their dollar for doctors' services, about four cents for cosmetics, about six cents for tobacco and about twelve cents for whisky, wine and beer. This is no temperance lecture, it is just a comparison of the expenditures that come out of the American family's budget dollar.

You and I hear complaints every day about the cost of drugs. Of course these drugs are higher than the calomel, aspirin and castor oil of another era of medical practice. But they actually are cheaper, if the patient will just compare his losses in time from work, the duration of the illness, now and in 1900 and consider the fact that modern drugs now save many lives, whereas in 1900 they only relieved pain.

Unfortunately, many people worry about the unexpected illnesses requiring surgery or long confinement after it has occurred. Yet, a combination hospital-surgical-obstetrical insurance policy can be had at a cost well within the reach of the man who can afford to pay anything at all to protect his family's health and budget.

Man has the same moral *obligation,* to protect himself and his family against unforeseen illness as he has to protect himself against fire, theft, storms and finally, the cost of death.

The Tennessee State Medical Association began work before World War II to develop a prepaid health insurance program. This program, called "The Tennessee Plan," was put into operation in July, 1949. Since that time 370,000 Tennesseans have obtained medical insurance coverage. We hope that half a million will have obtained such coverage by January 1, 1953. This plan is a *service* plan under which more than 1,700 Tennessee doctors commit themselves to accept from the insurance companies, not from the patient, a schedule of fees as *payment in full* for all types of surgery and obstetrical services. It now provides full payment coverage for a single person with an income up to $2,400 a year and for a family with an income up to $3,600 a year. All the policyholder pays out are nominal monthly premiums.

While I am speaking, some of you are thinking that the income brackets are too low. That is true and the House of Delegates of this Association agreed last July the 10th to raise the limits to keep pace with the rising cost of living. We are now in the process of working out a liberalized Tennessee Plan. It is being threatened by a ruling of the Wage Stabilization Board but we are fighting vigorously to obtain reversal of that ruling.

Ever since this Association was organized 122 years ago, and long before, Tennessee doctors have been treating indigent patients at no cost. They will continue to do so. At present this Association has a plan for the payment of hospital bills of the indigent by the public, to be submitted to the next legislature. You have read about it in the press. A survey is in progress at present to determine the overall needs for such a plan. The cost load of indigent care is now on the hospitals, church, labor and civic groups, voluntary welfare agencies and individuals. The so-called National Health Program of the federal government does not contain any provisions for the care of the indigent sick.

So we appeal to the public in general to help us obtain this humanitarian legislation. It will save lives, restore useful men and women to economic production, and further advance our standards of good health in Tennessee.

Many hard working doctors in this state are also full time Citizens. We fervently hope there will be many more before another year passes. The scientific progress of medicine has been tremendous in the past quarter of a century, but this progress has caused many physicians to withdraw into a scientific shell and take little part in public life. Perhaps that is the reason that modern medicine has not really earned a place for itself in society. It really has a most important place in society. It just has not asserted its right to that place. May I illustrate the attitude of the public.

Newspapers and magazines often "glamourize" the old family doctor, as he should be "glamourized." The modern doctor is presented as crisply efficient but a little aloof and cool as a human being. So it was a heart warming experience to read a letter to the editor recently in the *Nashville Tennessean*. It was in reply to another letter to the editor complaining about the disappearance of the old family doctor from the American Scene. Here is what a Nashville woman wrote:

"I agree that it was nice to have the family doctor visit in the home and act as a sort of 'Cheerer Upper' to the whole family while he administered to the needs of the patient. Very often, he listened to the complaints and various symptoms of grandma, grandpa, aunt or uncle who happened to be sitting in on the occasion. No doubt he did earn the love, admiration and everlasting gratitude of the patient and entire family as well—especially if he did not send a bill for his services!

"The doctor of today is far too busy to make visits in the home unless he has an emergency that requires it. He has a broader service than that of the old family physician. He not only sees an endless line of patients in his office, which is well equipped to make all necessary examinations and tests, but he must study constantly to keep abreast in his profession by the use of new medicines and drugs; by practicing the best methods of treatment; and by employing modern skills in surgery. He must also prepare speeches on public health; write articles for his professional magazines; and attend medical meetings when time will permit."

As your President-elect, I am happy to see here tonight so many leaders of organizations other than medicine. They have been introduced to you. I have been asked by some of my colleagues and laymen, "What is the rift between labor and medicine, or does a rift truly exist?" I, for one, do not believe a barrier exists between medicine and the working man. A false screen or artificial barrier has been manufactured. The relationship between the laboring man and his personal physician for the most part is excellent. The average laboring man has always by necessity been required to budget the cost of living. He has been no less desirous of an opportunity to budget the cost of unforeseen illness. In the absence of a positive program which would help solve this medical economic problem some of the so-called leaders of labor have supported a philosophy which we feel is contrary to our American way of life. I say the average working man is just as eager to preserve his freedom in matters pretaining to medical care as we physicians are to preserve our own freedom. The freedom of both is essential to the preservation of our American way. For the entire membership of our organization to be "labeled" because of a few leaders is an unjust stigma. Such a "label" has been placed by certain members of the medical profession without the sanction of the rank and file membership. This artificial barrier was created on the national level by parties from both sides, labor and medicine.

What I am saying tonight may not be 100 per cent popular. Those who feel that everything is all right, or that it is as right as it should be, certainly are going to disagree with me. What I am trying to say is that if we do not constantly strive for improvement there can be no progress, only stagnation and death. To quote a great statesman, "If we do not look backward, we never look forward."

One labor leader recently made the statement that his group most certainly did NOT want Socialized Medicine, but that it sought some way to require all its members to protect their families through health insurance.

Asked if we wanted his compulsion to be handled through Washington, the labor leader replied vigorously: "No, indeed. We do not. We want it at home." Well, I sympathize with this problem, and it is not one confined to labor. Many groups in this country are still unable to persuade all their members to invest in health insurance. So, I am wondering if local clubs, associations, brotherhoods, unions, or orders could not solve this problem by encouraging the purchase of health insurance. This would add one more good trait to the man's character—the fact that he felt and discharged his responsibility to his family. Under such a plan, you would have local control, or as some put it, home rule.

Are we making the progress we should toward solving the health problems of the American worker? Are we helping management in solving those problems; are we offering our services to improve health conditions in factories and the home environment of the workers? Labor leaders generally say that we are not measuring up to those responsibilities. Then why not begin now to plan a series of medico-labor and medico-management meetings looking to ultimate solution of all our problems. The results of such conferences, in my opinion would remove barriers and promote an understanding of the problems by all. In Nashville, the Labor Temple is directly across Polk Avenue from the Doctors' Building. It is possible, through contacts and tolerence of each others point of view to greatly shorten the figurative distance between those two symbolic buildings.

Management has done much to bring high level health conditions into Tennessee's mighty industrial plants and it would welcome all the help and advice we could give.

Now, may I talk a moment about the physician's responsibilities as a citizen. Because of the nature of his training he is an objective student of the human body in health and disease. It has been said that he could logically fit into a diagnosis and treatment of the ills of the body politic. And few will deny that there are cancers eating away at the body politic in this country.

When government interferes too much with local affairs and business, production drops, black markets appear and corruption becomes rampant.

The physician, having diagnosed this nation's major disease as oppressive bureaucracy and social planning, is ready to recommend a treatment. The remedy is less government, reduction of stifling taxes and wise expenditure of tax funds. Truly, the patient nation is "waste-ing away"—and that is spelled "waste-ing."

By any comparison with other nations, our economic system has always been superior. Why? Because we respect the rights and privileges of the human individual and have put into his hands the tools to increase his productive power. Our system is not perfect —but perfectible.

The modern physician must remember that a principle function of the government is to protect the individual in the accumulation and enjoyment of the fruits of his labor. Only in such a way can we hope to abolish poverty and to feed the three and one half billion people that will shortly be on this earth. That is a real challenge.

The moral breakdown in government at the national level is a challenge to the forty-eight states to rebuild this country's moral fibre, and do it from the grass roots. We can join with other citizens in a demand for restoration of the government to the people. But we can't do it by apathy and indifference. We can't do it by staying at home in great numbers on election day. We can't do it by refusing to participate in public affairs, by forever singing the theme song: "I'm Too

Busy." If we do, there are other busy bodies who will take over and we'll have only ourselves to blame.

May I draw for you a parallel on states' rights and responsibilities. We have our State Medical Associations, and then we have as the national organization the American Medical Association, represented here tonight by its distinguished President-elect. The State Associations are the parents, and the AMA is the child. That is because delegates from the forty-eight states and three territorial possessions are charged with formulating AMA policies. These delegates cannot delegate their policy making power to the executive body of the AMA. To do so would be shirking duty and responsibility, and for the executive body to assume these powers would be a wanton usurpation of rights that flow from the home level.

As citizens, doctors have a Public Conscience to which they must listen. If we set the example of always treating our fellow men right we can be a big force for the rebuilding of morality in government. It is true sometimes that reputation is what people think you are and character is what you are. Some of the people may be fooled some of the time, but we can never fool the still, small, but very insistent voice of our conscience. May I leave with you this challenging quotation:

"Be Loyal to the Royal That is Within Thyself."

The Encephalopathy of Hyperinsulinism, Feinberg, S. K., and Altschul, A.; Ann. Int. Med., 36:536, 1952.

The authors use the term hyperinsulinism to describe the clinical state which follows the excess administration of insulin, either from endogenous sources or insulin received by hypodermic injections. They emphasize the inadvisable use of the terms insulin shock, since no collapse of the circulation is involved or insulin coma, since coma is only one phase of hyperinsulinism.

The clinical manifestations all point to origin in the encephalon. Five phases are described.

(1) Cortical phase—depression of cortical functions, characterized by trembling, tenseness, palpitation, hunger, weakness, sweating, mental retardation, emotional instability, headaches, nausea, numbness, diplopia, excitement, mania, somnolence and disorientation.

(2) Diencephalic phase—freeing of subcortical motor nuclei from cortical regulation. Rigidity, muscle twitchings, primitive movements, restlessness, snarling, grimacing, and hyperirritability are often seen.

(3) Mesencephalic phase—mid-brain liberation.

(4) Premyelencephalic phase—resembles decerebrate rigidity—rigidity, positive Babinski sign and opisthotonos are characteristic.

(5) Myelencephalic phase—bradycardia, flaccidity, hypothermia, myosis, absent corneal reflex, and absent deep reflexes are commonly noted.

Although complete recovery usually follows proper treatment, there are instances when death occurs, even though hyperglycemia has been induced. Following hyperinsulinism permanent changes have been recorded, such as hemiparesis, ataxia, aphasia, choreiform movements, Parkinsonism, epilepsy, and mental deterioration. The incidence of occurrence of untoward results is difficult to determine. Even in severe types of induced hypoglycemia, such as that seen during the so-called Sakel method of treatment of psychoses, cerebral damage is noted in 3% to 30%, according to different authors.

Five cases are presented in detail. One patient following hypoglycemia developed personality changes; a second, mental deterioration, partial paralysis and aphasia; a third, marked, but fortunately, temporary encephalopathy; and two patients died, even though hyperglycemia had replaced hypoglycemia.

The pathological findings consisted of destruction of neurones of the cortex, and basal ganglia, proliferation of glial tissue and petechial hemorrhages. These changes are like those seen following morphine or nitrous oxide poisoning.

The mechanism of the change may be the result of a direct toxic effect of large doses of insulin. It is more probable that the damage follows the interruption of normal glucose metabolism, as a result of disruption of normal enzymatic activity of hexokinase. Since this enzyme activity normally is inhibited by pituitary and adrenal cortical activity, and promoted by the presence of insulin, it is suggested that ACTH and cortisone be used when hypoglycemic encephalopathy does not respond to glucose and permanent cerebral damage is imminent. (Abstracted for the Tennessee Diabetics Association by Albert Weinstein, M.D., Nashville, Tenn.)

The end result in hand injuries, in terms of function, is dependent in large part upon the skill and technics of the operator. All who are so situated as to, of necessity, do this type of work must give the subject much thought and attention.

THE MANAGEMENT OF INJURIES TO THE HAND

S. BENJAMIN FOWLER, M.D.,* Nashville, Tenn.

Injuries to the hand are common in both industry and in the home and they frequently result in much disability, often reducing the patient's future income. When we carefully analyze the result of treatment of injured hands, it is often strikingly evident that the residual disability exceeds the original injury. We see that our treatment may actually increase and spread disability. A patient with a fractured carpal or metacarpal may, as a result of his treatment, end up with stiff fingers, due to improper splinting.

Important factors which contribute to the disability and spread it beyond its original barriers are infection, improper surgical incisions, overzealous debridement, improper splinting and failure to control hemostasis and to prevent edema.

Infection

The prevention of infection is, of course, not always within the control of the surgeon. By careful skin preparation, cleansing of the wounds, removal of devitalized tissue, the use of as few sutures as is compatible with repairing the divided tissues and securing hemostasis, the closure of favorable wounds and the generous use of antibiotics, infection can generally be controlled.

Surgical Incisions

It is very important to avoid longitudinal incisions over the palmar surface of the fingers. These incisions will almost invariably contract and lead to flexion deformities. Likewise, longitudinal incisions over the palm of the hand and over the dorsum and palmar surfaces of the wrist are to be avoided at all costs. Longitudinal incisions over the dorsum of the fingers are not so apt to trouble as are palmar longitudinal incisions, but they too are to be avoided. Curved or transverse incisions may be used over the dorsum of the fingers. Any portion of the fingers may generally be exposed through a mid-lateral longitudinal incision. This incision passes halfway between the flexor and extensor surface of the finger and heals without scar contracture. Incisions over the palm of the hand should be designed not to cross flexion creases of the skin at right angles and should cross them at as an acute angle as possible. This can be achieved by curved incisions, or in an occasional case by the use of a zigzag type of incision. Curved or transverse incisions are made over the surfaces of the wrist.

Debridement

Conservatism should be exercised in the debridement of wounds of the hand. We should not do a complete wound excision but should remove only that portion of the skin which is obviously devitalized, and excise only such subcutaneous tissue as appears unlikely to survive. Foreign bodies that can conveniently be removed should be removed, but certainly, one should not further mutilate an injured hand in an attempt to find a small foreign body. If it is necessary to remove a large portion of the skin, then replacement with a split thickness graft is generally advisable. The best method of preventing infection is to close the wound, whether it is done by suturing or by skin graft.

Splinting

Whenever possible, the hand should be splinted in a position of function. In this position, the wrist is dorsified 15 to 20 degrees and there is moderate flexion of the fingers. The thumb is held in almost a direct extension of the radius so that it opposes the tips of the fingers but does not quite contact them. Any variation from this position in splinting must be done with caution. This is particularly true with the joints of the fingers, as they stiffen much more readily than the wrist joint. Metacarpophalangeal joints which are splinted in extension will very rapidly stiffen in that position in the presence of edema. Edema fluid has a high protein content and will effectively glue all gliding parts of the hand. Therefore, we must be particularly careful not to splint parts which need immobilization and splint the hand in as near a position of function as possible when formal splinting is needed.

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*Read before the Tennessee State Medical Association, Nashville, Tenn., April 10-11, 1951.

Prevention of Edema

Prevention of edema following injuries to the hand is most important. It is best controlled by a bulky pressure dressing, applied with the hand in position of function. It is further controlled by elevation. A bulky pressure dressing is the most effective method of controlling edema and we use it routinely following any operative procedure on the hand for at least five days. If fractures are present, they can be reduced and generally held in position very satisfactorily with the hand in position of function. This, of course, is not true in those avulsed fractures over the dorsum of the phalanges, due to rupture of the extensor tendon insertions.

Primary Treatment

A careful evaluation of the injured hand is necessary. The wound may be gently inspected by retraction of the skin margins but it should not be probed and no instrument should be put in the wound without adequate preparation. The wound should be covered quickly with a sterile sponge. Motion in the fingers should be tested against resistance and sensation in the fingers should be carefully checked. If fractures are suspected, an X-ray examination should be made. The extent of the injury is now determined. If anything more than simple closure of the wound is necessary, the patient should be transported to an operating room, where adequate assistance, instruments, drapes, lighting and anesthesia can be provided. The repair of divided nerves and tendons, open reduction of fractures and skin grafting should not be done in an emergency room.

A blood pressure cuff is next applied above the elbow, the arm exsanguinated and the cuff elevated to 300 millimeters mercury. With a sterile sponge over the wound, the hand and distal half of the forearm should be carefully prepared with bland soap and water and the skin shaved. After the skin around the wound is carefully cleansed, the wound itself may be irrigated. Tap water is generally satisfactory, although sterile water may be theoretically superior. The skin may next be prepared with a weak iodine solution, care being taken not to get any skin antiseptic in the wound proper. Sterile drapes are next applied. Conservative debridement is then done with removal of all devitalized tissue but with preservation of tendons, nerves and skin insofar as possible. Compound fractures are reduced and may be transfixed with small stainless steel pins if it is considered necessary. Tendons are preferably sutured with one single strand of fine woven steel wire. Nerves may be repaired with 00000 silk or with 000000 silk, using interrupted sutures through the perineurium. No sutures are used in the tendon sheaths or in subcutaneous tissues. The tourniquet is next relaxed and hemostasis secured by pressure and elevation and by ligature of as few vessels as is compatible with good hemostasis. The finest blood vessel silk is used for ligating vessels. The wound is then closed with interrupted sutures and a bulky pressure dressing is applied, with the hand in a position of function. The suture line of nerves and tendons is relaxed by moderate flexion of the wrist and the forearm is fixed by the application of a plaster of paris splint. It is almost always advisable to splint the fingers in a position of function and to slack tension off the suture line by positioning the wrist rather than the fingers. The sterile pressure dressing is left in place for at least five days, following which slight motion of the fingers, both active and passive, may then be begun. The splint should be left on for three weeks after the suturing of either a nerve or a tendon. In the case of extensor tendons of the wrist and fingers, it is generally advisable to leave the splint in place for four weeks. Three or four weeks of splinting is also generally adequate for metacarpal and phalangeal fracture healing.

After removal of the splint the patient

must be instructed in active exercises. Forceful passive manipulations are generally harmful. Physical therapy in the form of whirlpool, ultra violet and infra red lights is of no special value and the patient can just as well do his own physical therapy at home.

Repair of Nerves in the Hand

The repair of divided nerves at the wrist and hand, and even in the fingers, can be done with excellent promise of successful regeneration. Care must be taken to accurately approximate the nerve. Only the finest suture material should be used and these sutures should pass only through the outer sheath of the nerve and should not strangulate the nerve bundles. Care must be used to preserve the rotation so that motor bundles are against motor bundles and sensory bundles against sensory bundles. The suture line must be free from tension and this is obtained by positioning the wrist or the elbow, or both, and maintaining the desired position by a plaster of paris splint for at least three weeks. Technically, it is easier to suture a peripheral nerve two to three weeks after it has been divided, than it is at the time of injury. The perineurium is very thin but following the division of the nerve it undergoes hypertrophy and holds sutures much better at the end of two to three weeks, and for that reason many investigators have reported superior results when nerve suture is delayed. We feel, however, that unless a specific contraindication exists, the nerve should be sutured immediately. The failure to achieve restoration of function in a divided nerve following suture depends upon one of three complications. Separation of the suture line following neuroanastomosis due to tension on the suture line, an error of rotation or excess scar tissue formation at the suture line.

Repair of Tendons

If the wound has been cleanly incised and is no more than six hours old, it is felt that tendons may be safely repaired.

Not all tendons should be sutured primarily, even under the most ideal conditions. If several tendons are repaired within a small area, scar tissue formation will fuse the whole mass of tendons into one conglomerate scarred mass so that nothing can work and, therefore, in the presence of multiple tendon injuries it is advisable to repair only those which are functionally most important. Repair of the palmaris longus is never necessary, because it has no worth-while function. If both sublimis and profundus tendons to a digit are divided, it is necessary to repair only the profundi, as they are the most important functionally, and to attempt to repair both tendons will result in excess scar tissue formation and adhesions. When both flexor tendons to a digit are divided in the area between the distal flexion crease of the palm of the hand and the proximal interphalangeal joint, tendon suture should not be attempted. Delayed tendon graft is then the best method of treatment, done some three to six weeks following wound healing, and after complete passive motion has been restored to the digit. When all flexor tendons are severed at the wrist, it is not practical to attempt complete repair and only the profundi to the fingers and the flexor pollicis longus should be repaired. The wrist flexors and flexor digitorum sublimi may be ignored. Wrist extensors are, however, much more important to function of the hand than the wrist flexors and their repair should be done whenever possible.

When local conditions of the wound are not ideal for primary healing, or when adequate operating facilities are not available, it is best to defer repair of tendons until complete wound healing has taken place. A secondary tendon repair may readily be done at three to six weeks following injury, when conditions are more ideal, and when primary wound healing may be assured. If tendon suture is for any reason delayed beyond six to twelve weeks, then contracture of the muscle and tendon occurs, which necessitates tendon grafting. Tendon grafting is, however, preferable to an unsuccessful primary repair followed by infection and excess scar tissue formation, which will forever limit the potential advantages of reconstructive surgery.

Conclusions

The results of treatment of injuries of the hand can be immeasurably improved. If anything more than simple cleansing of the wound and closure of the skin is necessary, adequate operating facilities and trained personnel are necessary. Wound infection is best prevented by adequate cleansing of the wound, closure of the skin, and the use of antibiotics. Splinting in a position of function greatly reduces morbidity. Divided tendons should be repaired primarily only when specific indications exist. It is not always necessary to suture divided tendons. Delayed tendon suture and tendon grafting are often the procedure of choice.

DISCUSSION by Robert Brasher, M.D., Knoxville.

The Care of Hand Injuries—Lacerated Wounds, American College of Surgeons Committee on Trauma.

Any of the structures of the hand may be damaged by a lacerating injury. The treatment of such injuries is aimed at:—(1) protection from infection, (2) restoration of structures, (3) avoidance of deformity, (4) early restoration of function. Under the proper conditions, as described previously, examination of the hand should be carried out to determine the location and extent of the injury, the source of any major bleeding, presence of foreign material, function of tendons (test against resistance) and intrinsic muscles, condition of nerves (sensory and motor function), and the integrity of bone and joint. Examinations should be followed by thorough cleansing of the wound and meticulous hemostasis. Repair of damaged structures should be done in those instances where infection has *not* become established, where there is *no* gross contamination by highly infective material and in relatively clean wounds not more than three or four hours old. In wounds that are not amenable to immediate repair, cleansing should still be carried out and the several nerve ends identified with nonabsorbable suture material, or the ends loosely untied.

When repair is undertaken, the nerves should be approximated with arterial silk on fine needles using sutures through perineurium only. Care should be taken to avoid axial rotation in both motor and sensory nerves and all severed nerves should be repaired including digital nerves. Nerves may be distinguished from tendons by their anatomic position, softer texture, pinker color, small surface capillaries, and by the distinct nerve bundles seen on cut ends. *Pulling on a nerve will not flex a finger.* Care should be taken to handle nerves gently, never allowing them to be crushed, rubbed or to become dry.

Repair should include all severed tendons, including those of the intrinsic muscles. However, in the instance of flexor tendons divided either within the flexor sheath or in the digital flexor canal, primarily suturing rarely leads to a successful restoration of useful function even if the profundus alone is sutured and the sublimis removed, and almost never if both are repaired. So in this instance, it is sound practice to repair the remaining structures involved and to defer repair of the flexor tendons in this area until a later date when secondary reconstruction may be carried out. Approximation of tendons should be accomplished with non-absorbable suture material (silk or wire) after the ends of the tendon have been cleanly squared off with a sharp knife. Additional incisions to expose retracted tendon ends should follow flexion creases, should be curved or transverse, never longitudinal, and never in the palmar or dorsal mid-line of a finger. This is to avoid contractures and to minimize disability from the scars. The same care should be exercised in handling tendons as in handling nerves.

Muscles should be repaired by loose interrupted mattress sutures, avoiding tension and the muscle approximated should always be alive, contractile and vascular. Devitalized muscle should be trimmed away. The repair of nerves, tendons and muscle should be accomplished in a dry field maintained by a proximal hemostatis blood pressure cuff. After this part of the repair is complete, the cuff may be released and hemostasis assured by ligature of bleeding vessels.

The remaining layers of the hand should be lightly approximated with fine suture material and a firm pressure dressing applied separating the fingers. The hand should be splinted in the position of function except in those instances where the suture of severed tendons requires that the splinting be in the position of least tension on the suture lines. This splinting in *position of function* is especially important in nerve injuries so that disabling contractures may be avoided in active muscles where their opponents are paralyzed or denervated.

Aftercare of the hand should include elevation for three or four days, systemic administration of antibiotics, tetanus prophylaxis (toxoid or antitoxin as indicated), and no change of dressing, unless infection develops, until the end of the first week. It will require three weeks of undisturbed immobilization for several tendons and nerves to heal. Corrective splinting may be required after that time until re-innervation of paralyzed muscles has occurred.

The restoration of function is best secured after healing, by directed voluntary exercise and appropriate occupational therapy. (Abstracted by Benjamin F. Byrd, Jr., M.D., Nashville, Tenn.)

As the author emphasizes so well, there is probably no portion of the body so mistreated as the skin. Both lay and professional persons too often consider skin disease so lightly that self-medication or injudicious prescribing are astoundingly common. Newspaper advertising is especially pernicious in the continued mismanagement of disorders of the skin.

FALLACIES ABOUT THE SKIN

FRANK G. WITHERSPOON, M.D., Nashville, Tenn.

There are many popular misconceptions concerning our skin which are met with daily by all of us. Some of these have been fostered by the neighbor across the back fence or other well meaning friends. Some have been accepted without question by the patient from patent medicine ads or that sometime diagnostician and therapist, the corner druggist. Some have been handed down from generation to generation and are pure and simple "old wive's tales." Some have been born of a little knowledge which can most assuredly be a dangerous thing, and still others, I am afraid, are due to improper counseling on the part of the physician. I feel the skin receives more insults than any other part of the body. Few laymen, for instance, would dare to attempt treatment of the heart but ask anyone of them his remedy for poison ivy, ringworm or eczema and you hear a very enthusiastic discourse. In this short paper I will attempt to quote some of the common fallacies which we in dermatology hear nearly every day. Then I will attempt to point out what is wrong with these theories and why. This is not intended to be aimed at any special group, as everybody diagnoses and treats skin disorders.

Fallacy Number 1: "Acne is perfectly normal at your age. There is no use in doing anything about it as it will probably go away by the time you are 25 or 30 anyway." This is a very serious matter and such an attitude is reprehensible. In the first place, acne is not normal but is definitely a serious skin disorder for two reasons. First, the scarring which will last through life and which could be avoided in many cases by some proper treatment by the family physician and by some energy and willingness on the part of the patient to follow directions. Secondly, and probably more important, is the psychological effect. Acne comes at a most significant age. It begins when the child is about to become a man or woman. He is beginning to be interested in the opposite sex and his budding social life is the utmost importance to them. I think that severe "complexes" and occasionally perhaps even schizophrenia can be avoided when a nice skin can make an adolescent feel socially acceptable.

Fallacy Number 2: "The older I get, the more I seem to itch, particularly in the winter time. Although I bathe more often, the itching is not relieved." This is heard so frequently from elderly patients. They must be made to understand that as we become older it is inevitable that the sebaceous glands atrophy and consequently the skin becomes drier. The treatment for this is *not* more soap and water. Actually the patient should not bathe more often than once a week in the winter. Relief will be obtained in most cases by the use of an oil or a lubricating material of some sort and curtailment of bathing.

Fallacy Number 3: (This fallacy has many variations, so I will divide it into some subdivisions.) (1) "This is an acute, severe rash, so I'll use something strong on it"; or (2) "Doctor, that medicine you gave me wasn't strong enough, so I went to the druggist and got something good and strong"; or (3) "I guess I have tried everything for this rash, Doctor, at least anything anybody tells me." All three of these stories are variations of the same theme, adding up the same answer, *overtreatment dermatitis.* Putting something strong on an acute rash to "kill" the infection is about like curing a badly burned area by pouring boiling water over it. We must treat an acute eruption with soothing applications, which in most cases are best exemplified by wet compresses. I suppose the majority of cases of overtreatment dermatitis are from *self-medication* and many of these patients have used a dozen or more proprietory lotions or ointments only to become worse and worse. Just this week a patient told me that she had had "poison ivy" for two or three weeks and it was becoming worse. This I doubted, since uncomplicated poison ivy dermatitis doesn't last that long. Examination revealed an oozing, crusted eruption of the arms and chest with all the earmarks of an overtreatment dermatitis. Sure enough she had been applying a cream containing benzocaine which she had kept on using as "the poison ivy was becoming worse." Benzocaine, being a potent sensitizer, the diagnosis was obvious and only soothing compresses were necessary for her long-continued "poison ivy rash."

Fallacy Number 4: "I'm a mechanic; it won't hurt my hands to wash them in gasoline and oil. I've done it for years." This is a story frequently heard with slight variations, such as the occupation being that of a painter, filling station attendant or dry cleaner, but the answer is the same. Protracted use of organic solvents removes oil from the skin, causing itching, oozing eczematous eruptions about the hands. Folliculitis when oil is used, and fissuring with secondary infection also occur. In cold weather prolonged immersion in water or strong soaps will cause the same disorder. It should be mentioned at this time that housewives frequently suffer from eczema of the hands due to the defatting process of strong detergents and soaps, as in dish washing and household cleaning. It all sums up to the fact that few skins can tolerate long continued removal of oil from the hands.

Fallacy Number 5: "Everybody says I break out because my 'blood is too acid.'" We, as physicians, know that blood must be somewhat on the alkaline side, with a pH of 7.38 to 7.42 and that buffering substances keep it within this narrow margin. Most patients seem to think that citrus fruits will cause hyperacidity while actually these fruits are alkalinizing though, of course, not altering the pH of the blood appreciably. I suppose every kind of rash from acne to shingles has been thought due to "too much acid" by one patient or another.

Fallacy Number 6: "Since this rash is oozing so much, I guess I had better dry it up, therefore talcum powder and calamine lotion should do the job." This is probably one of the most common mistakes in treatment of the skin. Actually the edema is relieved by drainage and encouragement of drainage by wet compresses is indicated. I think the best rule of thumb here is, if the skin is wet, use wet compresses. If the skin is itchy but neither oozing nor too dry, use lotions, creams or ointments. If the skin is quite dry, use a lubricating ointment or liniment. The use of calamine lotion on an oozing rash causes the formation of a crust with the invitation to secondary infection. Also the use of a heavy grease on an oozing eruption causes further edema by mechanical blockage.

Fallacy Number 7: "This may be skin cancer, but let's just watch it for a while and see what happens." It is definitely a bad policy to play a waiting game with suspected malignancy. Few cancers of the skin cannot be cured. Early diagnosis is important and treatment *in all cases* consists of complete destruction of the malignant tumor. To "watch" an epithelioma and give it a chance to metastasize is nothing short of criminal negligence. There is no temporizing with cancer. I think that all of us in private practice should act as our own private cancer detection clinic. Certainly it does not do any harm to look at the back of the hands and the face and neck of patients coming into our offices. Be most suspicious of farmers and other outdoor men, being doubly watchful if they have red hair because of the thinness of the skin. Redheads have a much higher incidence of skin malignancy because of irritation by the sun's rays.

Fallacy Number 8: "Soap is a mighty good antiseptic, so scrub those weeping eczematous areas with a good strong soap and a stiff brush three times a day." It is astonishing how frequently patients will come in who have been scrubbing an acutely inflamed rash with tincture of green soap. I can imagine few things which could insult the skin more. Soap is *contraindicated* in an acute dermatitis and should be avoided. Use water, either plain or with epsom salts, boric acid, potassium permanganate, aluminum acetate or the like,—but never soap!

Fallacy Number 9: "It couldn't be this sulfathiazole ointment; I have always heard it will heal almost anything." We hear this same theme repeated again and again. There is little, *if any*, excuse for putting a sulfonamide on the skin. The rate of sensitization is so high that the cost in chemical dermatitis is prohibitive. So frequently are patients sensitized and their skin severely irritated by sulfa ointments that the Section on Dermatology of the American Medical Association passed a resolution, three years ago, recommending that sulfonamide ointments be outlawed. Yet we go merrily on applying them to the skin and causing many patients to become much worse with whatever skin condition they have. Too many dispensary shelves of the hospital, industrial plant or doctor's office hold sulfonamide ointments. Patients will frequently use sulfathiazole ointment, become worse, and so they try sulfadiazine ointment and possibly even a third member of the group, heaping insult upon insult on their helpless epidermis, which is "tearfully" trying to tell them to quit!

Fallacy Number 10: "I guess since I have got a skin rash, I will go get my skin tested." Many, many patients are going to the expense and discomfort of having an entire battery (perhaps 150 or so) of intradermal and scratch test performed. When there is a real reason for this as in asthma or hay fever, that is well. With skin eruptions this is completely unnecessary in 99 per cent of cases. I have stopped doing this for some time because of the obvious futility of such a procedure. *Very few* dermatoses are caused by food and inhalants. Now, *patch* tests in cases of contact dermatitis are of a great deal of value; small amounts of suspected materials are applied to the skin in a manner outlined in a previous paper.

Fallacy Number 11: "I shouldn't have played with that frog; now I have warts coming all over my hand." This is probably one of the oldest of the "old wive's tales" which all of us have heard all of our lives, an assertion probably originating because of the warty epidermis of the toad.

Fallacy Number 12: "I can pass within a hundred yards of poison ivy and develop a rash." This is a commonly believed fallacy in all walks of life. The truth obviously is that in even extremely hypersensitive individuals, the oily resins of the poison ivy plant must get on the skin. The only possible way they could get into the air would be in the burning of poison ivy plants with tiny droplets of oil being present in the smoke. The best way still for a hypersensitive person to avoid poison ivy dermatitis is to stay away from the plant. Poison ivy injections are of no value in the prevention of this condition and should be discontinued by the medical profession. Oral desensitization by poison ivy extract is occasionally somewhat helpful but must be given over a period of many months in very gradually increasing dosage.

Fallacy Number 13: "A round lesion on the body? Oh, that is *ringworm!*" A great number of skin diseases have oval to round lesions of various sizes, shapes and appearances. To many people, however, anything falling in this category is immediately classified as "ringworm." Actually, fungus diseases of the skin, with the exception of those on the feet and in the crural region, are quite uncommon. Therefore, we should think first of pityriasis rosea, contact dermititis, seborrheic dermatitis or psoriasis. In fact, "ringworm" should be placed far down the list of possibilities when one observes an annular eruption upon a patient's body. Let us not forget the circular eczematous lesions, so commonly seen on the dorsum of the hand. This is much more likely to be a so-called "housewives eczema" than ringworm. One will get much further by removing these hands from contact with soap and the use of a mild tar cream than by using Whitfields ointment or other strong fungicide.

Fallacy Number 14: "This dandruff remedy is guaranteed to cure my dandruff." When we consider the pathology of so-called "dandruff," the fallacy of this statement is obvious. Dandruff is due to excessive activity of the oil glands of the skin. By the use of various preparations this can be removed from the surface and secondary infection cleared up. It is not possible, however, to stop these glands from overproducing and to prevent the condition from recurring when medication is discontinued. The job of the physician is to find the proper combination of medications which will control dandruff and cut down the frequency of their use as far as possible, still keeping the scalp clear.

There are many other misconceptions regarding our skin. I have tried to point out a few of the more common ones which crop up in the doctor's office.

Occurrence of Innocent or Adventitious Cardiac Sounds in Childhood, Friedman, S., Robie, W. A., and Harris, T. W.; Pediatrics, 4:782, 1949.

The differentiation of adventitious heart sounds which are of functional or physiological origin from those of organic origin is important yet often difficult in childhood. In a study of "functional" heart sounds Friedman, Robie and Harris examined by auscultation 500 children between the ages of 2 and 12 years who attended the Medical Outpatient Department of the Children's Hospital of Philadelphia. Patients were selected at random with the single exception that all patients with a history or physical signs of rheumatic fever, chorea, congenital heart disease or hypertension were excluded. All adventitious sounds noted were, therefore, thought to be functional or physiological in origin. Each patient was examined in the erect and supine positions and again in recumbency following a period of exercise.

Results

Incidence. Of the 500 children examined, 234 or 46.8% were found to have a systolic murmur over some area of the precordium. Location of murmurs was as follows: 182 (36.5% of the group) in the midprecordium, that is, in the third, fourth or fifth interspaces to the left of the sternum but definitely to the right of the apex; and in 91 (18.2%) in the pulmonic area. Thirty-nine children (7.8%) had separate murmurs in the midprecordium and in the pulmonic area. Ten children were found to have murmurs loudest at the apex and one loudest at the aortic area, which by virtue of their quality characteristics were considered to be of no pathologic significance.

Quality. There was a striking and almost constant correlation between the location and quality of the great majority of these functional murmurs; those audible in the pulmonic region were typically blowing and low pitched, while the precordial variety were in almost all cases vibratory or buzzing in acoustic quality. In contrast to the typical high-pitched apical systolic blowing murmur of mitral insufficiency the murmurs heard in the present study were of lower pitch.

Intensity. Of the 273 murmurs 85.4% were classed as barely audible, 14.1% as moderately loud and 0.5% were considered to be very loud.

Transmission. Aside from the 10 murmurs heard best at the apex, a total of 39 other murmurs which had their point of maximal intensity in some other location over the precordium could be detected at the apex.

Position. The incidence of murmur in relation to position was as follows:

Position	*Murmurs*
Erect	101
Recumbent	199
Both erect and recumbent	98
Recumbent but not in erect	128
Erect but not in recumbent	5
Recumbent, additional murmurs heard only after exercise	42
Recumbent, disappearing after exercise	28

Pulse. The highest incidence of functional murmurs was found in those children with a cardiac rate of 90 beats per minute or less (49½%). The incidence was 47% in the pulse range 90-110 beats per minute, and in those children with a pulse rate above 110 beats per minute the incidence of murmurs was 22 per cent. Age, sex, state of nutrition and hemoglobin level apparently did not affect the incidence of adventitious murmurs.

Extra Cardiac Sounds. In the 500 children examined, a total of 157 extra cardiac sounds were detected in 137 (27.4%) patients. One hundred children (20%) demonstrated a physiologic third cardiac sound heard best on the apex or slightly to the right of this point; 34 (6.8%) showed a reduplication of the second cardiac sound; and 20 (4%) showed a reduplication of the first cardiac sound. A degree of association was observed between the occurrence of functional murmurs and the other adventitious cardiac sounds.

Familiarity with the high incidence and characteristics of adventitious or functional heart sounds in children should facilitate the differentiation of such sounds from the murmurs associated with organic heart disease. (Abstracted for the Middle Tennessee Heart Association by Thomas S. Weaver, M.D., Nashville, Tenn.)

PREFERRED PROCEDURES

The ophthalmoscope is a most useful instrument in the general physical examination in suspected systemic disease, acute or chronic. Your editor would agree that it should be ranked with the stethoscope as stated by the author. Its uses are many in prognosis and diagnosis in neurologic, vascular and metabolic, as well as other diseases.

THE USE AND VALUE OF THE OPHTHALMOSCOPE

ALLEN LAWRENCE, M.D., Nashville, Tenn.

Thirty-five years after the invention of the stethoscope, Helmholtz devised the ophthalmoscope. The centennial anniversary of his work is now being celebrated. Although the two instruments are of nearly equal age the use of the ophthalmoscope has not become as popular as the stethoscope. There are several reasons for this which if understood could be corrected.

A common cause is that many of us fail to acquaint ourselves sufficiently with its use during our training years. Frequently the initial cost is enough to frighten the average student into postponing its purchase. There is also a tendency to think of the ophthalmoscope as an instrument of the specialist. This concept would change if the idea could be conveyed that the eye is not just an individual organ of the body but has certain characteristics which render it important in determining the state of health of other near and distant structures. It provides the one area of the body wherein both portions of the peripheral vascular system and a nerve tract of the brain can be directly visualized unobstructed by other tissue. The transparency of the eye permits visualization of ocular changes resulting from many systemic diseases which are inflammatory, neoplastic and degenerative in origin.

Finally, the ophthalmoscope might be used more successfully if it were considered as a means for accomplishing a more complete general inspection in the physical examination. A small amount of effort in learning to use it would provide much information.

How to Use the Ophthalmoscope

If it is assumed that the reader has no knowledge of how to use the hand size electric ophthalmoscope, there are a few directions which might help him. The instrument is designed for examination of the interior cavity of the eyeball. The optic media consists of the aqueous, the lens and the vitreous jel. The posterior lining of the eye is termed the optic fundus and includes the head or disc of the optic nerve, the four groups of retinal arterioles and veins, the transparent retina and underlying choroid. The various lenses in the ophthalmoscope allow the examiner to adjust his eye at the different depths of these structures. If a regular routine is followed in the examination, it not only insures that all shall be seen that can be seen but it shall be seen more easily.

It is well to have the patient direct his gaze at an object in front of and slightly above the horizontal line of vision. This helps him to avoid moving his eyes and it also prevents the contraction of the pupil associated with accommodation. A subdued illumination in the examining room is of value in keeping glare from the surface of the cornea and in reducing the effect of light in the opposite eye from constricting both pupils, the consensual light reflex. The examiner should wear his own glasses if they are required and use his right eye to examine the patient's right eye and his left eye for the patient's left eye. This can be accomplished more easily by taking up a position at the side instead of in front of the patient. It is then suggested that the plus eight lens be rotated into place in the ophthalmoscope and from a distance of approximately eight inches the light is directed into the pupil. In the normal eye a circular red glow will be seen called the red or fundus reflex and is due to the reflection of light from the inner eye.

If there is an opacity in the *optic media* the red reflex will be obstructed and a black area will be seen corresponding to it in size and position. The opacity may be movable or fixed. If it is movable, it is located in the aqueous or in a fluid vitreous. If it is fixed, it is in the lens or the vitreous jel which has not liquefied. A diffuse cataract or opacity of the lens will prevent any red reflex from being seen. Extensive hemorrhage, inflammatory exudate, neoplasm and fibroplastic proliferation into the vitreous can also cause a complete obliteration of the reflex. By simultaneously reducing the strength of the lens in the ophthalmoscope and the distance of the instrument from the patient's eye the focus will change from the anterior media to the posterior media. This enables visualization of the opacity at its own depth. With a little practice it is not difficult to see the clear space behind the pupil occupied by a normal lens and thus differentiate a cataract and a vitreous opacity. Fibroplastic proliferations result from diabetes, tuberculosis, prenatal inflammation, congenital folds or malformation and more recently from retrolental fibroplasia of prematurely born infants.

As the strength of the ophthalmoscope lens is further reduced, the *fundus* detail will gradually appear. For orientation the *optic disc* is usually examined first. This is found by following the retinal blood vessels to their source as they emerge from the nerve. It is located slightly to the nasal side of a line drawn perpendicular to the center of the pupil. The disc is round, sharply outlined and pink in color. It has a central depression from which the vessels emerge called the physiological cup or excavation. This is paler in color. There can be considerable variation in the appearance of the disc with no abnormal significance. The apparent size may be small in a farsighted eye, large in a near-sighted eye and elliptical in an astigmatic eye. The medullation of the nerve fibers or axons of the retina which join to compose the optic nerve do not normally appear on the retina. However, this medullation may be found extending outward from the disc causing the normally sharp edge to become blurred or elevated. This should not be confused with an edematous nerve head.

The normal pale pink *coloring of the nerve* is lost when it becomes atrophic and the nutrient capillaries are occluded. The disc assumes a white or silvery color in complete atrophy with less pallor in lesser degrees of atrophy. There is usually a loss of substance manifested by a deeper and wider optic cup. It is unwise to depend entirely on pallor alone to make the diagnosis. It should be accompanied by some loss of function characterized by decreased central or side vision. A normal disc may seem to be pale by contrast in a patient with a dark surrounding fundus. It can also be pale in infancy and in anemic individuals without being atrophic. Optic atrophy may follow retinal disease, either inflammatory or degenerative or after circulatory interference as in arteriosclerosis or arterial occlusion. It may also occur from pressure or traction exemplified by glaucomatous atrophy or that resulting from tumors, aneurism, bony pressure, prolonged edema and traumatic avulsion. Optic atrophy appears after local or central nervous system disease such as tabes and multiple sclerosis. The optic nerve can be destroyed by toxins such as alcohol, lead, quinine and arsenicals.

When the disc details are lost, the physiological cup obliterated and the margins elevated from the surrounding fundus, it may indicate *edema*. In such a case there is usually increased redness from congestion and dilatation of the veins. Flame-shaped hemorrhages of varying size may radiate from the disc along the course of the vessels. Edema of the disc occurs from increased intracranial pressure, thrombosis of the central retinal vein or cavernous sinus, severe hypertensive disease, chronic nephritis, blood dyscrasias, severe septicema, optic neuritis and other local and systemic diseases.

After the disc has been examined, the light of the ophthalmoscope should be directed outward along the course of the *retinal vessels*. The veins are a darker red and slightly larger than the corresponding arteriole in a ratio of 3:2. The vessels are transparent except when there is intrinsic or extrinsic sclerosis. The arterioles show a surface reflection extending along the central portion of the vessel called the reflex stripe. As the vessels extend to the periphery they divide, cross and become smaller in caliber but maintain their proportion to each other. The arterioles can be reduced in diameter, either along their entire course, in which case they are said to be attenuated or in localized areas, when they are described as being vasospastic. Both types are observed in essential hypertensive disease toxemia of pregnancy and so forth and do not necessarily indicate that arteriosclerosis is present. Vasospasm indicates more active hypertension than simple attenuation. The first suggestion of organic change in the arterioles from sclerosis is an increase in the brightness of the reflex stripe. As the sclerosis progresses the red color of the vessels assumes a copper hue and in the advanced stage a silvery appearance, as the blood column can no longer be seen. The edge of the arteriole is also irregular or notched instead of smooth. Compression of the arteriolar-venous crossings develops when the sclerosis is greater in severity and of longer duration. Extrinsic or secondary sclerosis may occur following previous inflammation in the retina and is really a fibrotic repair process. It is characterized by parallel bright lines extending along the margins of the vessels. It does not ordinarily affect the function of the arteriole. Phlebo- or venous sclerosis occurring in hypertensive disease, diabetes mellitus and ocular inflammations impairs the flow of venous blood. The veins also become dilated from partial or complete obstruction farther along in the direction of flow as in venous thrombosis, leukemia and external compression. The phenomenon of venous and arterial pulsation on the surface of the optic disc is an interesting but normal one. The vein collapses during arterial systole and fills on diastole.

Upon completion of the visualization of the disc and blood vessels the intervening area of the *fundus* is observed. It has a diffuse red coloring due to the vascular bed of the choroid. The greater the amount of choroidal pigmentation the darker will be the fundus. The less the pigment the more distinctly will the vessels in the choroidal circulation be seen. The fundus is pale in anemia and practically white in occlusion of the central retinal artery. *Hemorrhages* associated with systemic and local diseases are flame-shaped and diffuse when they occur in the tangentially running layer of the retina or punctate or petechial when occurring in the deeper perpendicularly placed layers. Hemorrhages result from severe hypertensive disease, chronic nephritic disease, anemia, leukemia, septicema, venous thrombosis and incomplete obstructions, diabetes mellitus, head trauma and other causes.

The fundus can also become *edematous* either diffusely in the stroma or in localized patches on the surface. It will occur from venous obstruction and hypoproteinemia of various origins. A great deal of localized and generalized fundus edema with relatively little arteriolar changes is suggestive of chronic nephritis as the primary process in contrast to a smaller amount of edema, greater number of hemorrhages and definite arteriolar changes which occur in severe primary hypertension. The two pictures often blend as would be expected.

Pigmentation also occurs in the fundus. It varies in its amount, shape and distribution. It can be scattered diffusely in small patches in primary pigment degeneration of the retina and subsequent to certain diffuse retinal or choroidal inflammations or it can be accumulated densely in one area as in the inactive phase of a choroiditis, after trauma or in a neoplasm.

The *macular area* of the fundus is reserved for the last of the examination. This is done because it is in this area that the patient is least able to tolerate the light. It is difficult to expect prolonged cooperation in many individuals after it has been exposed to direct illumination. The macular area is located approximately the distance covered by two optic disc diameters on the lateral side of the optic nerve. The retinal vessels arch above and below it. It is darker red than the rest of the fundus and reflects less light except for the foveal spot. This is a glistening, refractile, discrete, pinpoint size reflection originating from the sides of the depression in the center of the macula. Abnormalities which are seen in the macula are more likely to affect the central visual acuity as it is this portion of the retina which is used for central fixation of vision.

When the routine of the ophthalmoscopic examination has been completed in one eye it is repeated in the other. It is well to remember the appearance of a structure noticed in the first eye and compare the similar one in the second eye. This method is of value in differentiating normal variations. Extreme contrast in what is seen in the two eyes is not too frequently a normal situation.

STAFF CONFERENCE

Thayer Veterans Administration Hospital

DR. ROBERT A. GOODWIN: This Conference will be concerned primarily with discussion of recent attitudes in the treatment of pulmonary tuberculosis.

Case Report

DR. MARJORIE F. ELLICOTT: The patient is a 27-year-old married Negro male premedical student who was admitted to this Hospital on October 27, 1947, complaining of hemoptysis two weeks previously, followed by productive cough, weakness and fever. The past history was non-contributory except for an episode of pleurisy of the right side in 1945, at which time examinations of the sputum and pleural fluid were reported as negative for acid-fast bacilli.

Physical examination at the time of admission included a temperature 105, pulse 110 and respirations of 44 per minute. The patient appeared severely ill and acutely toxic. There was consolidation over the major portion of the left lung field with numerous rales.

Laboratory studies were within normal limits except for an elevated sedimentation rate. The sputum was strongly positive for acid-fast bacilli. An initial chest X-ray film showed a dense pneumonic type of infiltrate in the lower half of the left lung with a confluent exudative process in the upper half of the left lung, and a diffuse fine fresh infiltrative spread throughout the entire right lung field.

On admission the patient was started on absolute bed rest and on November 6, 1947, streptomycin, one gram daily, was begun. Early X-rays showed an extensive spread to the right upper lobe with cavitation; however, subsequently, on bed rest and streptomycin there was a gradual clearing of the disease and contraction of the left lower lobe. In March, 1948, streptomycin was discontinued after a total of 120 days of therapy.

In August, 1948, there were intermittent hemoptyses and X-ray studies demonstrated cavitation in the contracted left lower lobe. A large pneumoperitoneum was instituted and on August 27, 1948, a left phrenic crush operation was performed with gradual cessation of bleeding.

By early 1949 there had been marked clearing of the right lung field and the left upper lobe as shown by the X-ray. However, the sputum continued positive for acid-fast bacilli, and on April 28, 1949, a left lower lobectomy was performed without streptomycin. Pneumoperitoneum was abandoned within three weeks following the procedure. Sputum became negative, and six months following surgery activity was gradually increased.

In May, 1950, a course of PAS (para-aminosalicylic acid), 12 grams daily for 120 days, was given because of positive sputum which was considered to come from tuberculous bronchitis of the stump of the left lower lobe.

In early 1951, a distinct cavity became visible at a previous area of nodular infiltration in the left upper lobe and on April 19, 1951, streptomycin, 1 gram daily, and PAS, 12 grams daily, were begun prior to a thoracoplasty in May. This was followed by a left upper lobectomy on June 7, 1951, thus completing the left pneumonectomy. Streptomycin and PAS were discontinued six weeks following surgery.

The patient's subsequent hospital course was one of progressive improvement with sputum remaining consistently negative and the right lung appearing stable on X-ray study on gradually increasing activity. On October 24, 1951, at which time he was on five hours of activity daily, he was discharged to continue his rehabilitation at home.

DR. GOODWIN: This case presents the problem of the management of severe, acute, far advanced pulmonary tuberculosis, with a large element of tissue destruction. The character and extent of the infection, and the factor of lower natural resistance, associated with the patient's race produce a disease picture long described as the "galloping consumption," which but a few years ago was almost invariably fatal.

Success in the present day treatment of this type of case requires the integrated use of medical and surgical techniques. The decisions made at each step in the management of this case represent the combined judgment of the medical and surgical staff.

The treatment of tuberculosis of the lung can be only as successful as the treatment of the person who has tuberculosis. The fears, the uncertainties. the financial insecurities, the necessary long drawn out and unpleasant restrictions of "The Cure" and fears and uncertainties for the future have a profound effect on the personality of the patient. The adjustment of the average patient to these overwhelming problems is extremely difficult, and requires in many

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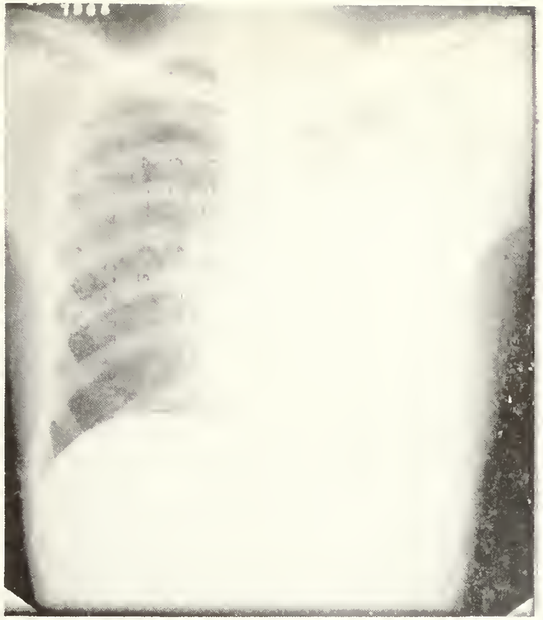
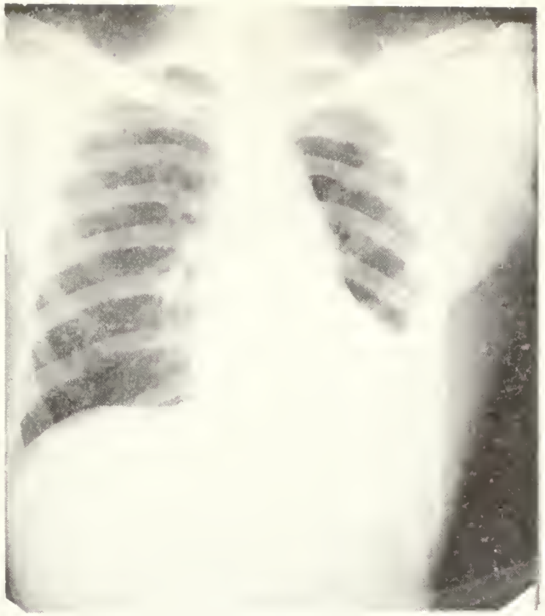
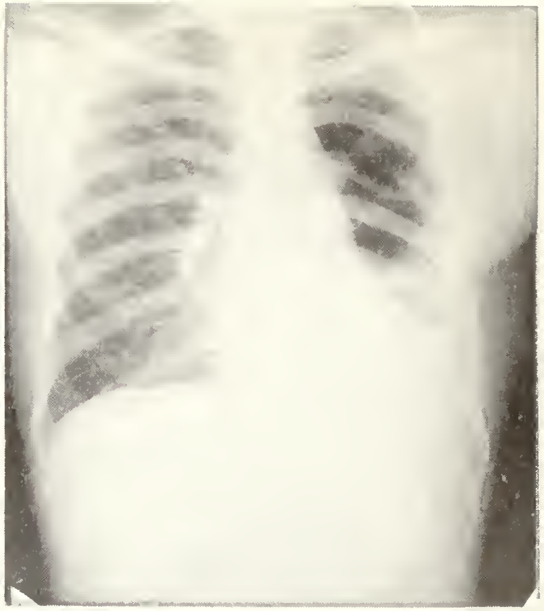

11 - 5 - 47

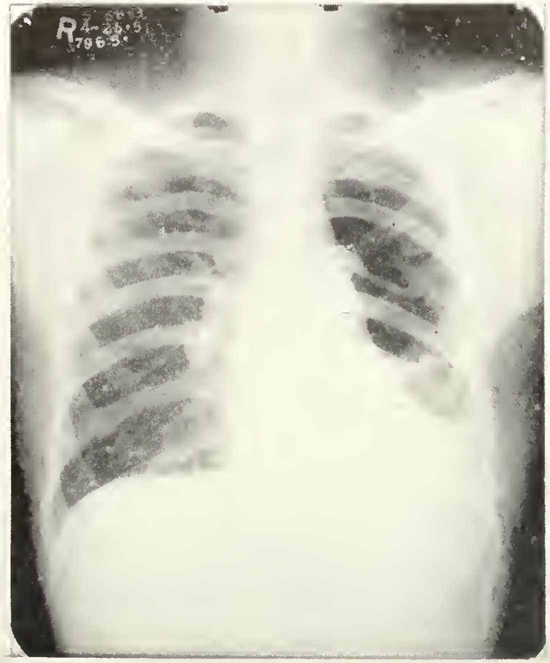
ON ADMISSION. TUBERCULOUS PNEUMONIA LEFT SCATTERED SPREAD UPPER 2/3 RIGHT LUNG.


8 - 2 - 48

MARKED CLEARING IN RIGHT, LARGELY CASEOUS, COLLAPSED LEFT LOWER LOBE.

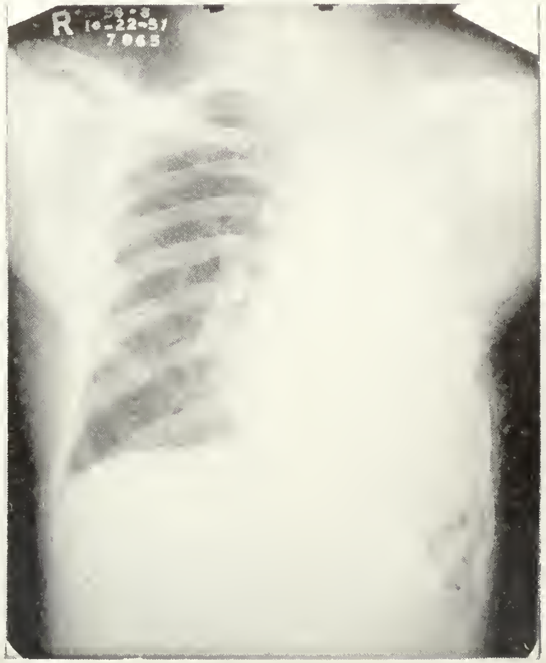

1 - 12 - 51

FOLLOWING LEFT LOWER LOBECTOMY. NODULAR RESIDUALS LEFT UPPER.



4 - 25 - 51

APPEARANCE THIN-WALLED TENSION CAVITY SECOND LEFT



10 - 22 - 51

AT TIME OF DISCHARGE. LEFT PNEUMONECTOMY COM-cases the support of the best judgment, counseling and patience on the part of the private physician or the members of the hospital staff. The success of any program of treatment is dependent in a large part on the degree of physical and emotional relaxation of the patient.

The case presented demonstrates clearly, although somewhat in an extreme degree, the two general phases in the treatment of pulmonary tuberculosis. The first phase is control of the acute inflammatory stages of the disease where bed rest, chemotherapy and perhaps later, temporary collapse procedure are the most effective methods of treatment.

The second phase is the management of the chronic residuals where control of the destruction and necrotic lesions is accomplished when indicated, by surgical methods with or without the support of chemotherapy.

Dr. Johnson, would you discuss the medical aspects of this case?

DR. HOLLIS E. JOHNSON: There is one interesting point I think we should discuss in the treatment of this case of tuberculosis, and that is the fact that the patient had pleurisy with effusion some years before he entered the Hospital. He was treated apparently successful at that time. Two years later, he had acute exudative tuberculosis. The best treatment for this type of tuberculosis, or any other tuberculosis is prevention, and here is a man who had pleurisy with effusion in which no acid-fast bacilli was demonstrable at the time, and a man who was apparently successfully treated at that time. Obviously, he had no follow-up after this illness. A serious mistake was made in not following him closely after he had pleurisy with effusion. It is well known that even though we sometimes cannot demonstrate tubercle bacilli in the fluid, it is not proof that it is not tuberculous. This man should have been treated as though he were known to have tuberculosis, because the chances were about 40 per cent that he would subsequently develop pulmonary tuberculosis. That fact was not kept in mind. This man should have been examined at two to three month intervals from the time he had the effusion until the time he came here. That is the first point.

The second point is that he had acute exudative tuberculosis which continued to spread under bed rest. I think that the treatment using streptomycin and PAS definitely was indicated in this case because it is of the type that responds to that sort of therapy. Subsequent films show how well he did respond. He no doubt would have been saved much hospitalization time and morbidity if he had been put on these remedies as soon as he was admitted to the Hospital. However, at the time he was treated these drugs were administered under protocol and could not be given without a two-month observation period.

When he developed his left basal cavity, collapse therapy was indicated. The only collapse measure that could be effective here was pneumoperitoneum, and this procedure was made more effective by a temporary phrenic paralysis. The pneumoperitoneum was effective in helping control the disease in the right lung. If the cavity in the left base had closed under the collapse measures employed, resection might not have been necessary. However, the large area of caseation in the lower left lobe makes it likely that we would have thought resection was indicated anyway.

Phrenic paralysis alone might have been considered here, but with exudative disease, which does not collapse effectively, it almost certainly would have been of no help.

Intrapleural pneumothorax might have been considered, but it would not have collapsed the exudative disease. The only collapse obtained would have been in the undiseased portion of the lung. This would not have been effective and would likely have resulted in pleurisy with effusion and subsequent tuberculous empyema. Therefore, phrenic paralysis, plus artificial pneumoperitoneum was the treatment of choice. The results testify to their efficacy.

DR. GOODWIN: Dr. Daniel will discuss the surgical aspects of the case.

DR. ROLLIN A. DANIEL: I think it is important to point out that at the time lobectomy was carried out, the diffuse exudative disease had become pretty well stabilized, adding considerably to the safety of the operative procedure. During 1947 and 1948, he was treated with antibiotics, bed rest and subsequently pneumoperitoneum, as a result of which the disease in the opposite lung became fairly stable. The lower lobe on the left became quite small and contracted so that at the time of operation there were several factors in his favor working for us with him.

In the first place, the lower lobe was well demarcated and delineated and collapsed, and not too difficult to separate from the air-containing lobe. In the second place, he had had a phrenic paralysis with elevation of the diaphragm and, therefore, the filling of the space, so important following resective surgery in the lung and particularly in a tuberculous patient, was quickly and easily accomplished here. The upper lobe, the remaining portion of the lung on the left side, re-expanded well and there was little or no dead space in which fluid could collect, and which would lead subsequently to infection.

He did well after operation. However, later when the patient was increasing his activity, a cavity appeared in the upper lobe. If this had been the only significant area of disease he had in the remainder of the left lung, we might have been able to remove it by "wedging" out this cavity, or removing that particular segment of the upper lobe and to have preserved still some tissue on the left side. Apparently at the time of this operation we felt there were other scattered areas of disease which we thought should be left behind and therefore we completed a pneumonectomy on the left side.

DR. GOODWIN: I'd like to ask Mrs. Scruggs, the Social Service Worker, if she would talk about the patient as a person, indicating the social problems which have had a particular bearing on the patient's reaction to medical treatment.

MRS. NELL B. SCRUGGS: At the same time that the patient was inter-acting with the Medical Staff in relation to treatment of his diseased lungs, which you have been discussing, he was also reacting to things happening within his family group. These things affected his total well-being possibly as much as the medical problems did.

The patient, a proud, sensitive, ambitious young Negro veteran, is the son of a Methodist minister in North Alabama. The Negro family had caught a vision of higher cultural standards for themselves and were moving towards that goal. Several siblings already had professional status. Our patient could allow himself to do no less, but the call to Service came and delayed his plans. Now illness had come to disrupt them.

Treatment of his tuberculosis meant long separation from his young wife and two infant children, one of whom was only two days old. He and his wife had planned theirs to be the ideal family, and were making a studied effort towards proper child-raising. It meant a change in the living arrangements and temporary dependence upon his sister to house his wife and children one hundred miles away from the Hospital. It meant interruption of educational plans launched two years previously by his entry into A. and I. College to take a pre-medical course. He had made excellent grades and was happy in the prospect of becoming a successful doctor one day.

The patient's wife decided to get a degree from A. and I. College while the patient was hospitalized. This deprived the children of daytime care of either mother or father. This also presented the possibility of the wife assuming and wanting to keep the dominant role in the family, a possibility intolerable to the proud and sensitive patient.

Frustrations naturally engendered fears and hostilities. With the positive help of his family, the doctor and the social worker, the veteran was able to handle his environmental problems and his negative feelings with the defense mechanisms he had learned to use. He fled from his resentments and fears into a pattern of conformity, exterior cheerfulness, intellectualization. In this way he got approval and status in his new environment, thereby remaining relatively comfortable psychologically. While a portion of his energies went into resolving his emotional conflicts relating to himself as a person and his family, it is believed the patient had sufficient inner resources and outside help to enable him to conserve the major portion of his energies for healing his tuberculosis.

DR. GOODWIN: Under the impetus of

the recent developments in the more effective use of chemotherapy and the greater experience and skill in surgical methods, there is a continuous progressive change in the management of pulmonary tuberculosis. Certain aspects of the present concepts of treatment will be discussed. Dr. Haltom, would you please discuss the role of bed rest in the treatment of pulmonary tuberculosis?

DR. THOMAS B. HALTOM: In these times of modern surgical techniques and antibiotic therapy, one is apt to neglect the basic therapeutic approach to pulmonary tuberculosis, namely, bed rest. Summarily, it may be said that best rest *alone* is indicated in those patients in which collapse therapy, excisional therapy, or antibiotics are either not indicated or are contra-indicated. One must remember that although bed rest does have its limitations, it most emphatically has no substitute and further, when other therapeutic measures are indicated, they most certainly should be utilized in conjunction with bed rest.

Complete bed rest means getting the patient, in so far as possible to as near basal status for every 24-hour period. This is easier said than done, and it cannot be accomplished simply by telling the patient to "go to bed" or "stay in bed completely." The patient should have a thorough explanation in minute detail of the rest program at the start of his treatment. Subsequently, strict enforcement and constructive supervision are essential if the patient is to succeed. It should be emphasized that just simply staying in bed is not sufficient. *Relaxation, physically and mentally,* is the goal the patient should seek.

In general, all patients with active tuberculosis are initially treated with complete bed rest. This should include such items as eating, reading, writing, shaving, etc., not only lying down but in as comfortable, relaxed, unstrained position as possible. A bedside commode chair is preferred to the bed pan, and should be utilized unless the bathroom is within a few steps of the bed. Bed baths should either be given to, or taken by the patient, depending upon the severity of the disease.

Complete bed rest, in general, is maintained until the disease has been stabilized as shown by X-ray examinations and the patient's sputum has been negative for a period of time, the length of time depending primarily upon the original extent and type of disease. If permanent collapse or excisional therapy is performed, the patient generally is kept on complete bed rest post-operatively for six months or longer, this depending upon the original extent of disease, the situation at the time of surgery and the results obtained by surgery.

Following the period of complete bed rest, there is a prolonged period of modified bed rest and rehabilitation with gradually increasing physical activity. The period of time consumed in this phase of the program depends primarily upon the extent and type of disease, the patient's occupation and his plans for the future. During the latter part of the rehabilitation program, vocational rehabilitation may be advisable.

DR. GOODWIN: Dr. Woodcock, would you discuss the role of the anti-microbial drugs?

DR. CLARENCE C. WOODCOCK: Several principles governing the chemotherapy of tuberculosis may be stated.

The first, already mentioned, is that *chemotherapy alone will not cure tuberculosis.* It is an adjunct, however, valuable in bed rest, just as adequate nutrition and other measures are of proven worth. The patient with active tuberculosis receiving optimal chemotherapy but remaining ambulatory will get worse more often than he will get better.

Second, *chemotherapy should be used only as part of a carefully considered, total though tentative plan of treatment of the entire illness.* The time and type of possible surgery must govern somewhat the timing of chemotherapy. The extent and type of pulmonary involvement, the presence or abscence of extrapulmonary tuberculosis and the organs involved should influence the dosage and the duration of chemotherapy.

Third, *streptomycin should rarely be used alone.* Preservation of organism sensitivity to streptomycin is of obvious value. The incidence of streptomycin resistant strains of tubercle bacilli in patients remaining sputum positive after a given course of streptomycin can be cut in half if para-animo salicylic acid (PAS) is given concurrently. Others, particularly "Amithiozone" (TBI, "Tibione"), are useful alternates for PAS if intolerance is encountered but none has yet proven as good as PAS for this purpose.

Streptomycin remains the most successful antituberculous drug. Dihydrostreptomycin is equally tuberculostatic and has been advertised as clinically superior due to supposedly less frequent toxic side actions. These advertisements are not entirely true. When used in dosages common in treating tuberculosis, drug fever and drug dermatitis may be less frequent with dihydrostreptomycin but the more serious neurotoxic reactions, especially deafness, are more frequent.

The chief value of PAS, itself moderately tuberculostatic, has been discussed. The optimal oral dose is 12 grams daily in divided doses throughout the duration of steptomycin therapy. This is about the largest dose that can be tolerated by most, and many have gastrointestinal irritation even at this dose. To avoid reactions the drug is best given with food and in the form of its sodium salt though some will tolerate the acid form and not the salt. Effervescent preparations are now available and reduce nausea and vomiting even further. Lyophilized sodium para-aminosalicylate, from which solutions for parenteral use can be prepared (1 percent subcutaneously or 3 per cent intravenously) will be released soon. This will be useful particularly in meningeal tuberculosis where PAS can be be given in amounts of 30-40 Gm. daily via the parenteral route with improved results.

Other drugs are under study but none are yet advisable for general use. Amithiozone parallels PAS in its tuberculostatic activity but its toxicity is greater, hepatic and renal damage occurring fairly often. Neomycin is too toxic for any but local use in man. Viomycin is relatively non-toxic but has not proven as tuberculostatic in vivo as in vitro. Mycomycin shows much promise but a satisfactorily stable form has not yet been found.

The recent deplorably premature and overly enthusiastic announcement in the lay press of a new "wonder" drug for tuberculosis has aroused great excitement. The drug is the hydrazide of isonicotinic acid. It is in the preliminary stages of clinical investigation only, and there is nothing so far to indicate that it will be superior to streptomycin and certainly nothing to indicate that it will be a miraculous wonder cure.

The indications for chemotherapy become continually broader. Within the limits of the principles stated above, it should be used in any acute tuberculous pulmonary lesion, either alone or in the presence of chronic disease, in tuberculosis involving mucosal or serous surfaces or lymph nodes, in hematogenous disseminations and with surgical procedures wherever tuberculous tissue is to be divided. It should be used with thoracoplasty only to assist in stabilizing lesions in the contralateral lung, where copious sputum must be reduced prior to thoracoplasty, or in event of the unusual post-theracoplasty bronchogenic spread of tuberculosis. Treatment in the latter instance is just as effective when started soon after the spread as when started "prophylactically" before operation.

In the case under discussion, lobectomy was done without the advantage of concurrent streptomycin therapy. I expect this was done because streptomycin-resistant organisms had been found in his sputum. Today, a report of streptomycin resistance would not prevent the use of streptomycin for 7-10 days pre-operatively and for 2-8 weeks post-operatively. The interpretation of in vitro resistance to streptomycin in tubercle bacilli is uncertain and many patients with streptomycin resistant organisms in vitro have satisfactory clinical responses to streptomycin. A few rare instances of emergence of streptomycin dependent strains of tubercle bacilli have been reported. This is rare, and fear of it should not hinder the use of the drug where indicated in the individual with resistant organisms.

Treatment schedules of 0.5 Gm. to 2 Gm. of streptomycin daily or intermittently over periods of from 30 to 120 days or more have been used and studied intensively. For a while the most successful clinical results in pulmonary tuberculosis were obtained with 1 Gm. of streptomycin given daily for 120 days. This schedule was improved by a slight increase in the clinical effectiveness and a great decrease in the incidence of streptomycin resistance when 12 Gm. of PAS daily was added. Recently it has been shown that the incidence of streptomycin resistance can be further reduced without change in clinical effectiveness by giving 12 Gm. of PAS daily for 120 days and streptomycin 1 Gm. daily until the patient becomes afebrile, then 1 Gm. every third day throughout the balance of 120 days. In far advanced pulmonary disease and hematogenous dissemination (especially meningeal, bone and renal tuberculosis), increased effectiveness is probable when daily PAS and intermittent streptomycin are continued throughout 6, 9, 12 or 18 month periods.

DR. GOODWIN: Will you discuss the present day use of temporary collapse procedures, Dr. Johnson?

DR. JOHNSON: Temporary collapse measures in general use are artificial pneumothorax, which is the oldest form of collapse to be generally used, artificial pneumoperitoneum, and temporary phrenic paralysis. The last two were combined very successfully in the case just presented.

The indications for artificial pneumothorax are in a general way those of collapse therapy. Pneumothorax was used almost exclusively until the permanent forms of collapse were developed. The complications of pneumothorax are so dangerous that with other procedures available which are of less danger, it has become of secondary importance.

An indication for pneumothorax now employed is when there is a cavity in one lung and a relatively good lung on the other side. It should not be employed in this instance until after a period of three months, more or less, has been devoted to bed rest. This should halt the progress of the disease and make pneumothorax less hazardous. One may employ streptomycin and PAS to accomplish this status before beginning pneumothorax, and the administration of these agents may be continued for a time after the collapse has been started. Artificial pneumothorax may be used for the control of hemorrhage. However, with the availability of streptomycin and PAS, it is doubtful if the first indication will apply very often.

Artificial pneumoperitoneum may be used under the same circumstance as indicated for pneumothorax, and it has the added advantage of closing basal cavities in many instances in which artificial pneumothorax is not effective. Many times a basal cavity will not close by pneumothorax, but will only be shifted into the area formerly occupied by the mediastinum.

Temporary phrenic paralysis is also indicated under the same general circumstances in which artificial pneumothorax is indicated, but it is more of a passive procedure than either pneumothorax or pneumoperitoneum. It can promote closure of cavities by relaxing the lung around the cavity. It may also be used to slow up the expansion of a lung after pneumothorax has been discontinued.

One of its most effective indications is in a case such as has been presented here, where it was combined with artificial pneumoperitoneum to control a basal infection with cavity.

All of these measures may be employed for the purpose of converting an inoperable case into an operable one. Many times the temporary collapse measure, or preliminary collapse measure, may be curative and remove the necessity of surgery.

DR. DOUGLAS RIDDELL: I thought it might be interesting to present some figures today on the types of surgical treatment used on the Tuberculosis Service in this Hospital during the past three years. I would like to compare the use of thoracoplasty with resective surgery, and I think the figures will stay in our minds better if I jot them down for you.

	1949	*1950*	*1951*
Primary thoracoplasty	24	28	17
Resective surgery	6	18	29

Starting off with primary thoracoplasties done as definitive treatment in two or three stages: In 1949, there were 24 patients who had primary thoracoplasties; in 1950, there were 28; and in 1951, there were 17. The use of resective surgery, including all types, shows the following trend: In 1949, 6 patients underwent resective surgery; in 1950, 18; and in 1951, there were 29. In 1952, there will be even more than the 1951 figure. That includes wedge resections of isolated lesions, multiple wedge resections and single resections, segmental resections and pneumonectomies. The trend toward the increasing use of resective surgery is rather striking.

DR. WALTER L. DIVELEY: Thoracoplasty is a relatively safe and effective form of surgical therapy in the treatment of pulmonary tuberculosis. The procedure is ideal for the collapse of cavities located in the posterior portion of the apex of the upper lobe. Even though pulmonary resection is being done with increasing frequency, thoracoplasty is still a useful form of treatment. In certain cases a thoracoplasty is done as a preliminary procedure. Pulmonary resection can then be done later, if necessary, under more ideal circumstances as far as the patient's condition is concerned.

DR. DANIEL: I might say that experiences at Vanderbilt Hospital have paralleled experiences here. The proportion of patients subjected to excisional surgery in the last two years has outnumbered patients on whom we have done theracoplasty. Under what circumstances will we advise excisional surgery? I do not think we can answer that at the present time completely. We can say that patients with bronchial disease, particularly stenosis of the bronchus and cavitation, should have excisional surgery if their condition permits. Patients with solid lesions should be subjected to this type of procedure because those blocked cavities are filled with exudate. We call this lesion a tuberculoma. Once the cavity is closed, it does not always remain closed. It may reopen or excavate later or after temporary collapse is abandoned. I think, also chronically ill patients who have gotten residual small cavities or residual solid lesions with an occasional positive sputum, are candidates for resection. As time goes on we will certainly add, I think, more patients to these. I do believe at the present time we will be inclined to do less thoracoplasties and more excisional surgery. In this connection, it is important to point out that we have not strived during the last three years toward this reversing trend. It has come about from our careful deliberation and consideration of the patient's problems. We did not know until Dr. Riddell's figures, that this had come about. We haven't tried to plan a series of lobectomies or pneumonectomies or wedge resections to see how they came out. *We have taken each patient and tried to decide on the basis of the disease that the patient had, which procedure was best.* I would also wish to point out that we do strive, and we should continue to strive to save as much pulmonary tissue for the patient as possible. That is why the idea of the removal of the segment of the lobe appeals to us. We have thought in the past that this is a more dangerous procedure perhaps than the removal of the whole lung, because we thought that the incidence of complications might be greater. I think they have been a little more frequent, but I think they are becoming less frequent as time goes on, and with the improvement of operative technic, we will be able to save more and more pulmonary tissue.

I would like to comment on thoracoplasty following lobectomy and pneumonectomy. We feel that no dead space should be left. This is much more important in patients with tuberculosis than in other types of pulmonary disease, particularly in a patient who has to have a whole lung removed. I prefer to do the thoracoplasty as a separate operation. Sometimes we like to precede the pneumonectomy with a partial thoracoplasty, completing it at the time of operation if justifiable. Following lobectomy or at the same time, not infrequently we remove short segments of the first, second, or third rib to help fill the apical space left. I would like to emphasize a point Dr. Woodcock made in regard to the indiscriminate use of antibiotics in patients with tuberculosis. They should be given as an adjunct and should be started only after a plan of treatment has been evolved for the individual. A patient with tuberculosis should not be begun on antibiotics without foreseeing what definitive treatment may be carried out.

I think we can look upon thoracoplasty in some instances as a temporary procedure. We have subjected patients in this institution to thoracoplasty, realizing that this is a preliminary operation; that if the condition improves, we may take out the lobe or whole lung.

DR. GOODWIN: This discussion would

not be complete without at least a mention of the use of pulmonary function studies. Not many years ago, the goal of treatment of pulmonary tuberculosis did not extend much past that of merely saving life regardless of the cost to pulmonary function.

Present day attitudes accept an arrest of the disease in the vast majority of cases, and are concerned with accomplishing this end securely with the preservation of a maximum degree of function of the lung. Specially equipped laboratories are able to measure many aspects of the defects in pulmonary function produced by disease. These methods hold considerable promise in a more accurate evaluation of the potential gain or loss of function as the result of surgical procedures and an evaluation of the capacity of the patient to withstand the hazards of surgery.

Hydration Treatment of Eclampsia, Turner, H. B., DeLozier, O., and Whitacre, F. E.; J.A.M.A., 148: 979, 1952.

Eclampsia represents an altered body physiology affecting primarily the circulatory system, manifested by hypertension and a disturbed water metabolism. A therapeutic regime has been presented which strikes at the principal points of physiological abnormality found in this symptom complex. Comparisons have been drawn between two series of cases, the chief difference of managment being the large volumes of fluid given patients in the second group. Although hydration therapy has not altered maternal mortality, it is believed that morbidity has been lessened and that, in general, patients given adequate amounts of fluid fare better than those who are further dehydrated as a result of therapy. Gross fetal morbidity has been slightly lessened, but definite conclusions will not be drawn until the second series can be enlarged to equal the first, which consists of 100 consecutive cases of eclampsia.

The complications of hydration therapy have been mentioned and steps to avoid these pitfalls have been outlined. There are two potential pitfalls to be avoided when patients are given large volumes of fluids. These conditions must be especially kept in mind when fluid is administered intravenously. Mengert and Hermes have reported cases in which pulmonary edema was precipitated by administration of large amounts of fluid by vein. The authors share fully this concern of overloading an already impaired circulatory system in the eclamptic patient, but among the cases reported here this complication has not been observed. The second complication of hydration therapy is the so-called "low salt syndrome." The authors have observed slightly low serum sodium levels in three instances. They have not lost sight of the fact that prophylaxis through good prenatal care is by far the most effective treatment of toxemia of pregnancy, and the authors continue to do what they can to encourage this principle. However, the authors have to accept a large number of eclamptic patients and this report deals only with the treatment of active cases. In these cases the object is to empty the uterus by the most conservative means at the optimum time, and the foregoing supportive and corrective measures seem to the authors to be worth while. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

CLINICOPATHOLOGIC CONFERENCE

Methodist Hospital, Memphis, Tenn.

A 68-year-old white female consulted her physician, complaining of weakness and loss of weight. Her illness began about 9 months previously, progressed slowly and was characterized by dyspnea, weakness and an enlarging abdomen. She was admitted to the hospital in an ambulatory state on September 13, 1951.

A review of the systems and past history revealed nothing significant.

On admission the patient had a blood pressure of 165/95, pulse 110, temperature 99.4°. She was pale and appeared to be anemic. The head, neck, chest and heart were considered negative. There was a suggestion of fluid in the abdomen. The edge of the liver was felt 4 fingerbreadths below the right costal margin. A freely movable, firm, non-tender mass was palpated in the left upper quadrant. Lipoma-like masses were found on the left arm and in the left scapular region. The remainder of the physical examination was negative.

The initial red blood count was 3,200,000, hemoglobin 5.5 Gm.; WBC 5,200, with 48% segs, 14 bands, 36 lymphocytes, 1 monocyte and 1 eosinophil. The red blood cells showed marked poikilocytosis and anisocytosis. Blood Kahn and Kline tests were negative and the urine was negative.

Between September 13 and October 22, the patient received 5 blood transfusions, September 14, 15 and 21, and two transfusions on October 22.

Laboratory studies were done as follows:

September 17, 1951: RBC 3,530,000; Hgb 8.5 Gm.; WBC 6,700 with 29% segs and 32% bands; test for Bence-Jones protein was negative; serum protein 6.2 Gm.%; A/G ratio 1.3/1; total quantitative Van den Bergh test 1.7 mg. per cent.

September 17: Urinalysis negative; capillary fragility test negative; direct Van den Bergh test 0.3 mg.%; RBC 3,460,000; Hgb. 8 Gm.; WBC 5,400 with 59% segs, 5 bands, 25 lymphocytes, 2 myelocytes, 9 metamyelocytes. There was 3 plus aniscocytosis and poikilocytes. Two nucleated red blood cells were found in the smear and there was moderate polychromasia.

September 20: Cephalin flocculation test 2 plus in 24 and 48 hours.

September 24: Sedimentation rate 5.5 mm. per hour (Wintrobe); packed cell volume 36%; corrected sedimentation rate: 43 mm. per hour; serum alkaline phosphatase 21 Bodansky units; RBC 3,840,000; Hgb. 9 Gm.; WBC 7,600 with 37% segs, 19 bands, 22 lymphocytes, 2 monocytes, 6 myelocytes, 6 metamyelocytes and 2 progranulocytes.

September 28: Bleeding time 1 minute, 15 seconds (Duke's method); coagulation time 7 minutes, 30 seconds (slide method); prothrombin time 80% of normal; Lee and White coagulation time 15 minutes; platelets 136,880 (normal 200,000 to 600,000); RBC 4,720,000; Hgb. 12 Gm.; WBC 10,050, with 46% segs, 16 bands, 29 lymphocytes, 1 monocyte, 2 basophils and 6 metamyelocytes.

October 4: Urine negative.

October 6: Prothrombin time 68% of normal; platelets 41,740; RBC 2,780,000; Hgb. 7:5 Gm.; WBC 8,750 with 49% segs, 25 lymphocytes, 3 eosinophils, 6 myelocytes and 6 metamyelocytes.

October 9: Bleeding time 2 minutes; BSP 8% retention in 45 minutes (dose: 5 mg. per Kg.); serum calcium 7.8 Gm.%; phosphorus 4.2 mg.%; alkaline phosphatase 19.8 units; direct Van den Bergh test 0.19 mg.%; total Van den Bergh 1.1 mg.%; clot retraction time 2 hours, 30 minutes.

October 19: Platelets 77,070; RBC 3,670,000; Hgb. 7.5 Gm.; WBC 9,100 with 34% segs, 19 bands, 24 lymphocytes, 12 myelocytes, 11 metamyelocytes and 1 atypical cell.

October 30: Platelets 133,280; RBC 3,420,000; Hgb. 9.0 Gm.; WBC 10,000 with 23% segs, 26 bands, 24 metamyelocytes, 12 myelocytes and 12 lymphocytes.

A plain X-ray film of the abdomen revealed normal position of the kidneys and an enlarged spleen. A KUB film on September 18 was reported as no evidence of Hodgkins. Films of the skull on September 24 showed some evidence of calcification of the glomus of the choroid plexus, otherwise there was no remarkable abnormality. An EKG on October 9 was negative.

During her stay in the hospital there was almost a daily rise of temperature in the afternoon. The fluctuations varied from normal to as high as 102.2°.

Several consultations were obtained with internists, surgeons, surgery, and hematologists. On two occasions the patient was taken to the operating room for diagnostic procedures. Therapy in the hospital was supportive. The patient was discharged, slightly improved on October 21, 1951.

DR. J. B. WITHERINGTON: The X-ray films are here. They will be interpreted by Dr. Mabry.

DR. E. H. MABRY: This KUB film, which was made on September 14, shows a large mass in the region of the spleen extending down to the left iliac crest. A normal kidney silhouette can be seen through this mass. The bones of the pelvis and vertebrae are denser than normal. This density is fairly homogeneous. There is no increase in the size of the bones. In the PA view of the chest, the heart appears enlarged to the left and it has a configuration suggestive of left ventricular enlargement. The lung fields show fibrosis. The ribs also show increased density. Views of the skull show no remarkable abnormality. The increased density of the skeletal system, excepting the skull, consists of coarse trabeculations of the bony architecture, with invasion of the medullary bone, and a lack of spongiosa and medullary structures. These findings are compatible with myelosclerosis.

DR. WITHERINGTON: Dr. Gendel, of Kennedy Veterans Administration Hospital, has been invited to discuss this case.

DR. B. R. GENDEL: This patient presents a very interesting but difficult clinical problem and I do not believe that I can arrive at a single diagnosis with the information at hand. I will attempt to narrow down the possibilities to one or two, and then to ask for certain additional information. The major features are, (1) the presence of splenomegaly and (2) a leukemoid reaction in the peripheral blood. I propose to consider the problem of differential diagnosis from these two standpoints.

First, with reference to the splenomegaly, this may be caused by a number of conditions. (1) Acute infections may result in splenomegaly and, interestingly enough, some of these may also be responsible for a leukemoid reaction. Subacute bacterial endocarditis should be considered because of the accompanying fever. However, no heart changes were observed, no hematuria present and I do not believe that we need consider this diagnosis further. Tuberculosis may give a picture similar to this, particularly when there is miliary dissemination involving the spleen and producing massive splenomegaly. However, there were no evidences of miliary tuberculosis elsewhere. Brucellosis and Hodgkin's disease should be mentioned. Sarcoidosis may produce massive splenomegaly. However, the patient's age and the absence of hyperproteinemia of hyperglobulinemia are against this diagnosis. (2) Cirrhosis of the liver with congestive splenomegaly could give a picture such as this. It is noteworthy that there were some abnormalities in liver function tests, indicating the presence of liver disease. (3) Myeloid metaplasia of the spleen is characterized by splenomegaly and a leukemoid reaction. This condition will be discussed later. (4) Gaucher's disease may produce massive splenomegaly. This disease usually begins earlier in life and need not be discussed. (5) Hemolytic anemia is accompanied by splenomegaly, by anemia, by the elevated serum bilirubin and in crisis may show a leukemoid reaction. A leukocyte count and urobilinogen studies of the urine and feces would have been helpful in further considering this possibility. On the basis of the *splenomegaly*, the two strongest possibilities are cirrhosis of the liver with congestive splenomegaly and myeloid metaplasia of the liver and spleen.

The second point of departure for further consideration is the presence of a leukemoid blood reaction and by this I mean either (1) the presence of immature white or red cells in the peripheral blood or (2) a leukocyte count over 50,000. On the basis of the first of these criteria, this patient had a leukemoid reaction. In fact, one must consider whether the patient had leukemia. This would not seem likely because the peripheral blood picture was not sufficiently striking. In addition, fever was present. When fever accompanies leukemia, it has been my experience that the patient either has an intercurrent infection, acute leukemia or is developing an acute exacerbation of chronic leukemia. The latter possibilities do not seem to be the case because of the absence of blast cells in the peripheral blood. I do not believe the patient had leukemia.

The causes of the various leukemoid reactions are: (1) Infections. These may simulate lymphocytic or granulocytic leukemia as is the case in this patient. The fever would further support an infection but no evidence of a pneumococcic or meningococcic infection was present here. As mentioned previously, miliary tuberculosis may also simulate leukemia but there is also no supporting evidence for this. (2) Intoxications and drugs, such as burns or sulfonamide administration can be easily ruled out in this case. (3) Hemorrhage, hemolysis or thromboses. There is no evidence here for bleeding; hemolysis has been discussed previously, and there is no evidence for thrombosis. (4) Bone marrow disturbances. These include a number of conditions involving the bone marrow and occasionally resulting in leukemoid reactions. Metastatic carcinoma is the most common of these but there is no evidence for the usual primary site in the thyroid, breast, lungs or kidneys. Multiple myeloma produces a leukemoid reaction in about 55 per cent of the cases and I notice this was under consideration because a test for Bence-Jones protein in the urine was reported as negative. Hyperglobulinemia was not present and while hepatomegaly and splenomegaly may occur in multiple myeloma, they are not common. I believe that we may dismiss this diagnosis from further consideration. Next, we must consider a condition which appears in the literature as myelofibrosis, agnogenic myeloid metaplasia, myeloid metaplasia of the liver and spleen and a host of other names. This condition may produce a massive splenomegaly, may give a leukemoid reaction with the presence of immature red and white cells in the peripheral blood. This diagnosis is one of the strongest possibilities and is supported by the characteristic radiographic findings in the bones. Hodgkins disease and xanthomatosis may also give rise to leukemoid reaction but there is no strong evidence for these diagnoses. (5) Carcinoma without bone marrow involvement may occasionally result in a leukemoid reaction. In general, this is due to metastases to the spleen, hemorrhage, necrosis or rarely may occur for no obvious reason.

From a consideration of both these lines of thought, I believe we can come to a tentative diagnosis and at this point we can state that the most likely possibilities in this patient are,—(1) idiopathic myelofibrosis with myeloid metaplasia of the liver and spleen, or (2) metastatic carcinoma of the bone marrow or spleen with a leukemoid reaction. In order to differentiate these conditions, I believe the following studies would be indicated: first, a sternal puncture, and if this were unsuccessful, as it might be in myelofibrosis, a trephine biopsy of the sternum would be indicated; second, liver aspiration biopsy or splenic aspiration biopsy; third, a reticulocyte count and urobilinogen studies would be of value in connection with the possibility of a hemolytic anemia. Was there a biopsy of the bone marrow?

DR. WILLIAM W. TRIBBY: Yes, a biopsy of the bone marrow was done. But, preceding this, an attempt was made to aspirate marrow from the sternum. A fair variety of marrow cells was obtained, including some nucleated red cells. About 4 per cent of the cells were histiocytes. This was considered suggestive of aplasia of the marrow. As was indicated by Dr. Gendel, we were not quite sure that we had a true picture of the marrow. It was necessary to make a definite diagnosis in order to decide upon the advisability of performing a splenectomy. Therefore, about one week following the attempted aspiration of marrow, tissue for biopsy was removed by needle from the spleen. This contained several multinucleated cells which were thought to be megakaryocytes. A diagnosis of myeloid metaplasia of the spleen was suggested but we could not be certain of it.

Finally, a laparotomy was done and tissues for biopsy were obtained from the liver and spleen. At the same time a portion of bone was removed from the ileum. The colored lantern slides illustrate the results. The first slide (Figure 1) is a picture of the bone marrow. Notice that practically no marrow cells are present and that the marrow spaces are almost entirely replaced by fibrous tissue. Bony trabeculae may be seen along the right side of the slide. The next slide (Figure 2) shows a low power view of the liver. Very abundant hematopoietic tissue is present in the sinusoids, to such an extent that it resembles fetal liver. Mild fatty changes are seen in the liver cells. Numerous megakaryocytes were identified under the microscope and some of these are shown in the following picture. Next, we have a low power photograph of the spleen. Here again, we note the presence of abun-

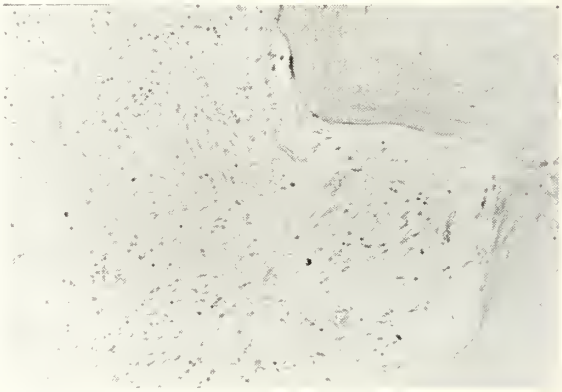


FIGURE 1. Bone marrow showing complete fibrosis of the marrow spaces. Hematoxylin and eosin stain: 100x.

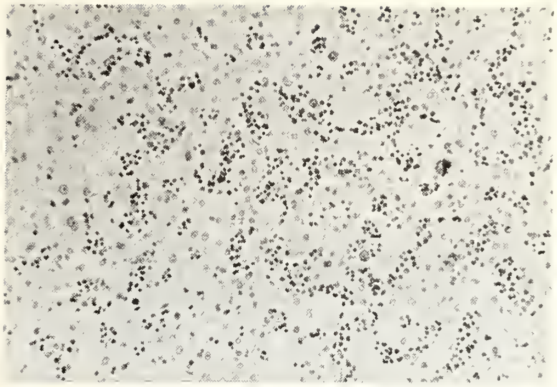


FIGURE 2. Liver biopsy resembles fetal liver because of large amount of hematopoietic tissue in the sinusoids. Hematoxylin and stain: 100x.

dant hematopoietic tissue, which becomes particularly apparent when the large multinucleated cells, the megakaryocytes, can be identified. These are shown in higher magnification on the last slide (Figure 3). The diagnoses of myeloid metaplasia (or extramedullary hematopoiesis) of the liver and spleen and fibrosis of the bone marrow are now well documented. It was recommended that the spleen be left alone.

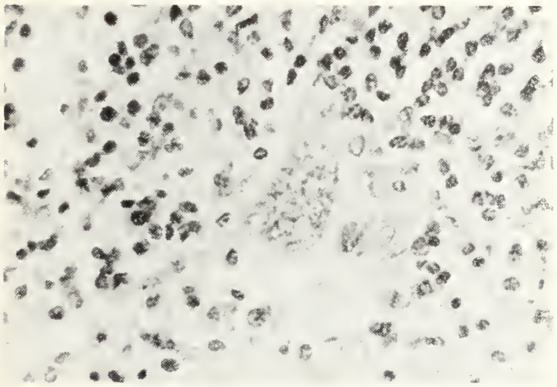


FIGURE 3. Biopsy of the spleen reveals extramedullary hematopoiesis. A megakaryocyte is visible near center of this view. Hematoxylin and eosin stain: 400x.

I wish to congratulate Dr. Gendel upon the excellent discussion which he has given us and upon the correctness of his diagnosis. He has mentioned several terms that have been applied to this diagnosis. An imposing list of other terms could be quoted. Some of these are myelosclerosis, aleukemic megakaryocytic myelosis, myeloid megakaryocytic hepato-splenomegaly, chronic non-leukemic myelosis, myelophthisic anemia and numerous others. The term agnogenic myeloid metaplasia is one of the most interesting ones. It was suggested by Jackson and Parker in 1940.[1] The word agnogenic is very similar to idiopathic. It means "of unknown origin or etiology." This is not always true as was amply demonstrated by Wyatt and Sommers.[2] The term which I prefer is myelophthisic anemia.

DR. WITHERINGTON: Are there any more comments?

DR. B. R. GENDEL: I would like to make a few additional remarks about this condition. It is important to differentiate it from leukemia and to avoid radiation of the spleen because the spleen is believed to be the major hemopoietic organ, the bone marrow being fibrotic. It is also important to avoid splenectomy as this removes the major blood-forming organ in these patients. The deleterious effects of both radiation and splenectomy are well documented in the literature. That these dire consequences do not always follow is indicated by two patients, one who had radiation and the other splenectomy, before coming under my care. The course of both patients did not seem to be strikingly influenced by these forms of treatment. Nevertheless, there is certainly nothing to be gained by their use and it is best to avoid them. The usual hematinics, liver, B_{12}, iron and folic acid are without effect and the only helpful treatment is the judicious use of blood transfusions.

DR. WITHERINGTON: Would anyone else like to take part in the discussion? If not, the meeting is adjourned.

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OUR NEW PRESIDENT

Dr. Daugh W. Smith
Nashville

CAT.

He Practices Medicine, Humanity, and the Hippocratic Oath

Those who know him well will tell you that Daugh W. Smith, M.D., goes far beyond just practicing good medicine. They will say he also serves humanity sympathetically, and that he *lives* the Hippocratic oath.

A good insight into Dr. Smith's philosophies of life and medicine is best found in the text of his inaugural address as the 1952-1953 President of The Tennessee State Medical Association.

Daugh Smith's parents, the late Mr. Willie Smith and Mrs. Emmer Ruth Smith, had a son and 5 daughters. They wanted their children to have good educations, so they moved near Union College, at Barbourville, Kentucky. Daugh Smith entered Union and after graduation, he obtained his A.B. Degree at the University of Kentucky.

After graduation from Kentucky University, funds ran low, so he taught school a year, then entered Vanderbilt University School of Medicine, won his M.D. four years later, interned in Nashville General Hospital, and began practice in Nashville. He specializes in proctology.

At Kentucky University, he was a Delta Tau Delta, and at Vanderbilt a member of Phi Delta Pi Medical Fraternity. He married the former Miss Lucile Barbee of High Point, North Carolina. They have a daughter, 'Cile Daughleen, whose birthday is on the same day as her father's. The Smiths reside on Golf Club Lane in Nashville.

Dr. Smith's ascension to the Presidency of TSMA tops a long list of leadership honors in organized medicine. He is a past president of the Nashville Academy of Medicine and Davidson County Medical Society, a member or chairman of many of its committees, immediate past Treasurer and Chairman of the Board of Trustees of TSMA, and now a Director of the Nashville Academy.

Dr. Smith is an Assistant Professor of Surgery at Vanderbilt, and an Associate Professor of Surgery at Meharry Medical College.

The new President lays special stress on the social responsibility of the medical profession to render service regardless of the ability to pay. When he graduated from medical school, his father made only one request. It was this: "Don't ever turn down anyone because they don't have the money to pay for the medical care they need." Dr. Smith's patients know how well he has followed his father's request.

Dr. Smith is one of the founders of The Tennessee Plan of voluntary prepaid health insurance, now covering 375,000 Tennesseans.

Outside his professional life, Dr. Smith is a full-time citizen. He has been and is now a leader in movements to improve the educational, cultural and religious life of Nashville. He is one of the founders of Harpeth Hall, a new school for girls, and one of its Trustees. He is a Deacon of Hillsboro Presbyterian Church. He is the "father" of the TSMA Woman's Auxiliary essay contest.

Hobbies that absorb Dr. Smith's spare time, if any, are, first, his 10-year-old daughter. Then come gardening and bird hunting.

His reading trends heavily to medical literature. He contributed to it recently as a scientific essayist on the 1952 program of the Southeastern Postgraduate Medical Assembly in Atlanta.—*Ed Bridges.*

The President's Page

AN APPRECIATION FOR YOUR EXCELLENT SUPPORT

Dr. Kelly

Since the other officers make their individual reports, this report will be limited to the activities of the president during his incumbency.

I stated last year that I hoped to visit all of the 48 medical societies of the State. I am sorry to report that I fell far short of that goal. I did visit some ten or twelve societies, however, including the Nashville Academy of Medicine; a joint meeting of Hamilton and Bradley Counties and their auxiliaries; the Knoxville Academy of Medicine, and several of the smaller counties. It was also my privilege while acting as your president to address the Kiwanis Club of Cleveland, Tennessee; this privilege being arranged by my good friend, Dr. Bill Garrott.

Your president, with considerable prodding and much help from Mr. Bridges, managed to get an article for the President's Page in the Journal, just before the deadline. It was my plan to have guest writers fill in most of these pages, but here again I fell short of my goal.

Last year I stated that I was interested in having this society help the Negro doctors of our state in every way that we could. I have given the matter much thought, have talked with many of the leaders in our state society on this subject, and have also met with the Bluff City Medical Society (colored) to get their views on how we could best serve them. I have also communicated with other state societies on the problem of the Negro doctor. My conclusions at the end of a year's study is that there is so much skepticism, both among the white and colored physicians, that the problem deserves further study.

At the request of the Commissioner of Public Welfare, I appointed a medical advisory committee to the Department of Public Welfare. The purpose of this committee is to aid and advise the Department in its medical problems. This committee is composed of Dr. R. H. Kampmeier, Chairman; Dr. J. N. Thomasson, Dr. Beulah Kittrell, and Dr. W. W. Hubbard.

Let me say again in conclusion that your cooperation has been far beyond my expectations. I especially want to thank Dr. Kampmeier, Mr. Foster and Mr. Bridges for the many, many acts of kindness and cooperation. If you give my successor, Dr. Daugh Smith, the same hearty cooperation you have given me, and I am sure you will, the society will move forward with great strides during the next twelve months.

Respectfully submitted,

Ernest G. Kelly

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APRIL, 1952

EDITORIAL

MODERN TREATMENT OF TUBERCULOSIS

The Staff Conference from the Thayer Veterans Administration Hospital in this issue summarizes well the present state of management of pulmonary tuberculosis.

It is more than a half century since Trudean laid the basic concept of *rest* in the therapy of tuberculosis, thereby permitting the human organism to localize and to heal the inflammatory process. Several decades later the application of *local rest* had become established in the various forms of collapse therapy,—artificial pneumothorax, oleothorax, temporary or permanent paralysis of the diaphragm. Later this principle was extended in the use of thoracoplasty, extrapleural pneumothorax and more recently pneumoperitoneum. All these procedures have as their objective localized rest of the lung and the closure of cavities,—permitting healing, preventing pulmonary spread and reducing the health hazard from the public health viewpoint. Now excision has been added.

With the advent of the antibiotics the hope for an antibiotic for tuberculous infection inflamed the imagination. So far this hope has been satisfied only partially. Streptomycin has become a valuable adjunct to rest therapy whether general or local. A cooperative study by the Veterans Administration, Army and Navy included an experience with the use of streptomycin between 1946 and 1951.* The problems encountered with the use of streptomycin have been partially controlled. Toxic effects were reduced by a decreased dosage to the point of 1 Gm. twice weekly. A disadvantage of paramount importance, the development of increased resistance on the part of the tubercle bacillus has also been partially negated by the introduction of para-aminosalicylic acid (PAS) to be given concomittantly with streptomycin. Thereby drug resistance has been reduced then from about 80 per cent to less than 20 per cent.

In the Cooperative Study pulmonary tuberculosis has been treated in general on a 120 day schedule, which was found to be more satisfactory than a 90 day one, by the use of streptomycin twice weekly and PAS daily. To date this regime seems to give maximum therapeutic effects with a minimum of toxic effects and bacterial resistance.

The use of chemotherapy as a part of the general management of the tuberculous patient and its use as ancillary treatment in the surgical attack on the diseased lung has been well illustrated in the Staff Conference in this issue of the Journal.

The Cooperative Study has found chemotherapy to be effective in certain of the cases of miliary and meningeal tuberculosis, forms either usually or always fatal. The groups are small and follow-up has been no more than for two years. With streptomycin alone the survival rates at the end of 24 months were: for miliary only, 27 per cent; for meningitis only, 11 per cent; for miliary and meningitis, 8 per cent; for miliary followed by meningitis, 0 per cent. With a 12-month follow-up of combined streptomycin and PAS therapy survival rates were: for miliary only, 65 per cent; for meningitis only, 40 per cent; for miliary and meningitis,

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*Chemotherapy of Tuberculosis in Man. Report of Council on Pharmacy and Chemistry, J.A.M.A., 147:253, 1951.

55 per cent; for miliary followed by meningitis 24 per cent. (No definite conclusions can be drawn from these latter figures because of the few cases treated and the tendency to relapse in the second year.)

Antibiotics other than streptomycin have been found to be active against the tubercle bacillus in vitro but toxic effects in the human have prevented their use.

Drugs other than antibiotics are under investigation in Europe as well as in this country. Unfortunately the use of these was publicized prematurely in the lay press of recent date as if the millennium of tuberculosis control had arrived. Only painstaking study, as shown in a cooperative effort as that of the Veterans Administration, Army and Navy program, can establish the efficacy of a new chemotherapeutic agent.

R. H. K.

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DUTIES OF SOCIETY MEMBERSHIP

In this issue appear two writings which every member of the Tennessee State Medical Association should read not once but twice.

Your incoming president has outlined for you your duties as a doctor and member of organized medicine. He has placed on your shoulders the success of the Tennessee Public Service Program,—an opportunity to reestablish to former levels a respect for the profession which has unfortunately deteriorated in the lay mind. It has been suggested that the medical profession assume the leadership in things medical in these days of a changing order in social and economic fields. Your President decries the tendencies of some to charge excessive fees, and points up the need for grievance committees to adjust either actual or fancied inequities. You are charged with the responsibility of making a continued success of the Tennessee Plan,—your best weapon against some form of state medicine. With this Plan you may join that large vocal segment of society, labor, which wishes security against the cost of medical care but under a free system. But as a citizen of a free country you must continue to provide care for the indigent of the community and last but not least, exercise your prerogative of the ballot in this year of 1952.

These are the things urged upon you by your President. These things are done in the main through organization. The basic organization is the county medical society. What are your thoughts and actions in this regard? Your editor asks that you consider then, the comments of Dr. Raulston which follow this editorial.

Are you taking too much for granted? Probably so! You may assume that the county society which gives you entree to the specialty societies has that as its main function. This seems to be the feeling especially of younger members who have entered the profession since special societies have burgeoned in such great members. The county society deserves more than lip service. Dr. Raulston has some significant thoughts on this matter.

Since some of the special societies and hospital staffs, to which membership in the county society is a stepping-stone, require a certain attendance, except for a good excuse, would it be too illogical to require the same for the local society? He also suggests a more rigid attendance record for the younger man and the requirement that he appear on the program during his novitiate as it were. These are some of the items which have been raised for consideration of the officers of the county societies who are plagued by poor attendance.

"The first, and in some respects the most important function (of the society) is . . . to lay a foundation for that unity and friendship which is essential to the dignity and usefulness of the profession, . . . The well conducted medical society should represent a clearing house, in which every physician of the district would receive his intellectual rating, and in which he could find out his professional assets and liabilities." (Osler.)

R. H. K.

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Special Article

IT IS TOO EASY TO BE A MEMBER OF A MEDICAL SOCIETY

JOE L. RAULSTON, M.D.,* Knoxville

It has occurred to me that perhaps membership in organized medicine is too easily obtainable.

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*Past-President of the Knoxville Academy of Medicine, presented at Public Service Meeting, Knoxville, April 7, 1952.

When a physician becomes a member of his local medical society, he is thereby granted certain privileges for a life-time; to practice and enjoy the benefits and protection of an organization whose history is replete with sacrifice and whose glory is in its constant endeavor to improve its services to mankind.

What does the average man in medicine give in return for the privilege of membership in this great and honorable profession? *Unfortunately the only obligation assumed by a young doctor on election to his society are ethical conduct and the payment of dues.*

These remarks are not intended to point the finger at any individual but, to the contrary, to call to the attention of all that the preservation of the rights of the profession and the advancement of scientific attainment is a problem that needs and deserves the *active participation of every member.*

One often hears the remark that, "I do not attend my society meetings because it is run by the same old crowd, so what's the use?" This "same old crowd" probably runs it because no one else will take the time, or go to the trouble, to attend the meetings. Mistakes are made, of course, but the members in charge are doing the best they can under the circumstances. The only way of influencing the actions of your society is by attending meetings and lending help and expressing yourself on all matters concerning the profession.

It is called to the attention of the membership of all component societies of the state organization that membership in the local society is a prerequisite to (1) membership in state and national associations, (2) membership in specialty groups, and (3) membership on hospital staffs.

It is obvious that if membership is so eagerly sought after in the higher echelons of medicine, then the attainment of membership in the local society, which is a prerequisite to membership in the higher echelons, should not be so lightly taken as it is by some men.

The following are some suggestions that might be remedial or at least stimulating to some of our delinquent membership.

1. The minimum requirement for renewal of membership in the local society at yearly intervals should be attendance of at least one-third of the stated meetings of that society.

2. Acquirement of membership on the active staff of at least one hospital, local conditions permitting.

3. Committee on Attendance should be appointed by all local societies to do the following:

   A. Telephone members and urge them to attend.

   B. Make personal calls on delinquent members.

   C. Have the president write special letters to the delinquent members, encouraging them to participate. (We could take a tip from the Rotary Club which does not tolerate lax attendance.)

The Society Program Committee should encourage young members, especially those of a timid or reticent personality, to write a paper or speak at meetings.

It is evident that a longer prohibition period, possibly one year with courtesy privileges, should be a prerequisite to membership in a local society. During this period, the candidate should be required to attend at least three fourths of all stated meetings as evidence of good faith and to acquaint himself with the personnel and procedures of the society.

It is trite but absolutely true that medical organizations, just as any other bodies, are only as strong as their weak links. May I leave with you this conclusion: Doctors must pay with far more than just dues if they are going to be useful members of their medical societies. They must serve.

DEATHS

Dr. Owen Hassell Williams, Savannah, died of a heart attack on March 22, 1952. Dr. Williams was a lifelong resident of Hardin County, and a graduate of Vanderbilt University School of Medicine. Aged 72.

Dr. Roy Lawrence Hendley, Cross Plains, died of a heart attack on March 15, 1952. Graduating from Vanderbilt in 1939, he began practicing at Cross Plains in 1939. Aged 42.

★

Dr. J. H. Stephens, retired Hendersonville physician, was killed instantly when he was struck by an automobile on February 28, 1952, while crossing Highway 31-E in Hendersonville. Aged 82.

★

Dr. Roy A. Doty, Rogersville, died February 19, 1952, following a heart seizure. Dr. Doty was mayor of Rogersville for three terms, and a member of the Rogersville School Board for 26 years. The *Rogersville Review* cited Dr. Doty for "not only contributing to medical service to Rogersville but he contributed greatly to its civic improvement." Aged 66.

★

Dr. Barney Brooks, Professor of Surgery and Surgeon-in-chief at Vanderbilt University School of Medicine from 1925 until his resignation last year, died on March 30 of a cerebral vascular accident. A man recognized nationally and internationally for his contributions in research and as a stimulus to young surgeons, Dr. Brooks built up one of the strongest departments at Vanderbilt. His former students and house-officers will remember him always as an outstanding teacher. It can be said without the peradventure of a doubt that Dr. Brooks left his imprint on the practice of medicine and surgery in Tennessee.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Wilson County Medical Society

Members of the Society are now attending the lectures of the Postgraduate Committee at the County Health Department each Monday night. Recent officers elected were: President, Dr. Phillips Turner; Vice-President, Dr. Frank B. Dunklin; Secretary-Treasurer, Dr. R. C. Kash. Dr. O. Reed Hill was elected delegate to the TSMA, and Dr. Sam McFarland, alternate.

Memphis Society Employs Executive Secretary, Opens New Headquarters

Robert C. Bird

Projecting a strong Public Service Program, the Memphis and Shelby County Medical Society has employed an Executive Secretary-Public Service Director and opened headquarters for the profession and public at 1363 Union Avenue.

The layman secretary is Robert C. Bird, a Kansan with a solid background of experience in working out health and medical care programs with the public. A native of Hays, Kansas, Mr. Bird is a graduate of the University of Kansas, and he added one year of postgraduate work in personnel work and business administration at Harvard.

Prior to and following three years Army service, Mr. Bird was associated with Stephens College, Columbia, Missouri, as Public Relations Director. He was for two years a feature writer for the Hays daily newspaper.

For the past three years he has been executive secretary for the Western Kansas Development Association.

"Our problem out there was to get doctors into medically-isolated areas," Mr. Bird said. "In some sections the nearest doctor would be 50 to 75 miles distant. The association cooperated with the communities in financing, building and equipping one-doctor hospital installations."

Announcement of the Society's new secretary and office set up was made by Dr. Henry B. Gotten, President, and Dr. Samuel L. Raines, Chairman of Public Service. They said the office would provide health and medical care information for the public, would receive complaints, and handle the Society's business affairs.

They said Mr. Bird will carry out the policies and projects of the Society in an all-out effort to extend highest quality medical care to all of the people, and keep the people informed of these plans.

★

Greene County Medical Society

The Society held its regular meeting early in March in the General Morgan Room of the Hotel Brumley. Dr. Albert Weinstein read a paper on "The Use of Radio-active Iodine in the Diagnosis and Treatment of Thyrotoxicosis." Several physicians from Johnson City attended the meeting.

★

Consolidated Medical Assembly

Two Vanderbilt University staff members addressed the Assembly at its regular dinner session March 4 at the New Southern Hotel in Jackson. Dr. Harrison Shull spoke on "The Medical Aspects of Portal Hypertension" with Dr. Lamb Myhr leading the discussion. Dr. James A. Kirtley discussed "The Surgical Procedures for Portal Hypertension." His paper was discussed by Dr. Hughes Chandler. A good attendance was reported.

★

Consolidated of West Tennessee

Members of the Assembly are volunteering their services in giving physical examinations to white and negro school children in Jackson. All pupils are examined every other year through the 12th grade. The project is in cooperation with the Jackson Department of Education. Fifteen members examined the pupils in both negro schools in one day last month.

★

Hamblen County Society

The Society held its annual president's banquet in late February. Dr. Sam Syllenberger of Dandridge was elected president. Dr. Frank Milligan of Jefferson City is the vice-president, and Dr. R. A. Purvis, Morristown, was elected secretary. Dr. F. F. Painter, dean of Hamblen County physicians was presented his "fifty-year pin" by the Tennessee State Medical Association.

★

Memphis and Shelby County Society

A film, "Weight Reduction Through Diet" was scheduled to supplement a symposium on weight reduction at the early March meeting of the Society. Dr. Phil B. Bleecker was to discuss "Overweight in Relation to Heart Disease"; Dr. Jean M. Hawkes was to discuss "Obesity Due to Metabolic Disorders"; Dr. Henry B. Turner was to present "Abnormal Weight Gain During Pregnancy"; and Dr. C. E. Gillespie was to close with a discussion of "Obesity as a Surgical Problem." The film was supplied by the Memphis Dairy Council.

★

Washington-Carter-Unicoi Society

The "Tri-County" Society has not only endorsed the Carter County Emergency and Rescue Squad, but voted $50.00 to help in the work which the Society termed a "worthy project." The action was taken by resolution and published in the *Elizabethton Star*. Dr. J. D. Bowman is President, and Dr. John M. Wilson, Secretary.

★

Knoxville Academy of Medicine

The first bi-weekly meeting in March was a dual affair. Dr. James D. Murphey, Chief Surgeon, Veterans Administration Hospital, Oteen, N. C. addressed the Academy on "Cystic Diseases of the Lungs." Prior to the scientific session, the guest speaker and many members of the Academy visited the E. T. T-B Hospital where the Hospital Staff was scheduled to present a program on "Treatment of Tuberculosis" during an afternoon session. Dr. P. M. Huggin is the Medical Director of the T-B Hospital.

The March 18th meeting of the Academy was highlighted by a visit by Dr. Ernest Kelly, Memphis, President of the State Association.

★

Nashville Academy of Medicine and Davidson County Medical Society

The members of the Academy were invited to hear Dr. Howard Armstrong of Chicago, guest speaker of the Nashville Society for Internal Medicine on March 4. The title was "Late Complications in the Clinical Use of

ACTH and Cortisone." On March 18 the Academy members were invited to hear Dr. W. F. Rienhoff, Jr., of Baltimore speak on "Lesions of the Esophagus." He was guest speaker of the Nashville Surgical Society.

NATIONAL NEWS

American National Red Cross

A Special Report on the Blood Program has been issued recently to publicize the results of the blood program established four years ago.

In 1950, after the onset of the Korean conflict, the Red Cross was asked to collect blood for the treatment of casualties. Within five days from the setting of quotas, blood was on its way by air to Korea. From August 23 to November 30, 1950 the Red Cross provided 30,144 pints of whole blood and 80,000 units of serum albumin to the Department of Defense entirely financed by the Red Cross. Thereafter the Department of Defense agreed to reimburse the Red Cross for the "actual audited costs of technical operation."

The blood has been collected on a nationwide basis through 44 regional blood programs,* 15 defense blood programs,* 121 mobile units, 2 railroad donor cars and 33 cooperating blood banks whose facilities were used for defense blood collection.

The regional blood programs continue to collect blood for civilian needs as well as those for defense.

The Red Cross summarizes the following accomplishments.

Pints of Blood Collected (August 1, 1950-January 31, 1952)

From August 1, 1950, to January 31, 1952, through Red Cross regional and defense programs, approximately 1,430,000 pints of blood were collected for the Department of Defense, and through regional programs nearly 1,966,000 for civilian use. In addition, nearly 328,500 pints were provided for defense through cooperating blood banks during the same period.

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*In Tennessee the Regional Blood Program of Nashville and the Defense Blood Program of Memphis have played their part.

Blood Derivatives Distributed Since Beginning of Program

After World War II, the Red Cross received 5,012,505 packages (250 cc each) of salvaged war surplus plasma from the Army and Navy. The following table shows the distribution of dried plasma and the quantities of serum albumin and immune serum globulin processed by the Red Cross and distributed through state health departments and regional blood centers:

	Totals	*Est. Com. Value*
Dried plasma (from 1946 through Dec., 1948)		
250-cc units	3,172,341	$63,446,820
Serum albumin (from Feb., 1947 through Jan., 1952)		
20-cc units	13,382	107,056
100-cc units	*156,770	6,270,800
Immune serum globulin (from April, 1944 through Jan., 1952)		
2-cc units	3,261,362	13,045,448
Grand total at current prices		$82,870,124

The Current Fiscal Year

For the fiscal year July 1, 1951, through June 30, 1952, the American Red Cross accepted a base quota of 2,800,000 pints of blood for defense. Civilian commitments are in addition to this quantity. Following are the preliminary figures on the number of pints collected throughout the country during the first 7 months of this fiscal year as reported from Red Cross regional and defense centers:

	Defense Collections	*Civilian Collections*
July 1951	42,418	99,896
August	47,021	107,824
September	73,135	120,439
October	176,717	146,895
November	234,917	143,456
December	187,319	125,384
January 1952	209,355	158,728
Totals	970,882	902,622

Through cooperating blood banks during this 7-month period, 224,329 pints of blood were collected for national defense.

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*Including 80,000 units given to the Department of Defense.

MEDICAL NEWS IN TENNESSEE

Chattanooga Chapter of the Tennessee Academy of General Practice Organized

Twenty-four Chattanooga area general practitioners and officials of the Tennessee Academy of General Practice were present for the organization of the Chattanooga Chapter at the Chattanooga Golf and Country Club on March 19, 1952.

Dr. C. B. Roberts, Sparta, president of the Tennessee Academy presided. Other officers of the Tennessee Academy present were Dr. Ogle Jones, Centerville, director; Dr. O. Reed Hill, Lebanon, director and president of the Andrew Jackson Academy; Dr. Louis A. Killeffer, Harriman, director; and Dr. James P. Anderson, Nashville, director. Dr. W. A. Hensley, Cookeville, president of the Five-County Medical Society also attended.

Dr. Franklin Johnson, Chattanooga, was elected president of the new Chapter, Dr. M. F. Langston, also of Chattanooga, was elected vice-president. Dr. Cleo Chastain was chosen secretary-treasurer. Dr. Roberts installed the officers at the charter meeting.

The Chattanooga Chapter is a chartered component academy of the Tennessee and American Academies of General Practice. The national membership now exceeds 15,000.

Hospital Construction in Tennessee

By courtesy of the Washington Office of the AMA, the status of Hill-Burton hospital construction in Tennessee as of March 1 was as follows:

COMPLETED AND IN OPERATION:

21 projects at a total cost of	$15,901,137.00
Federal contribution	5,319,894.00
New beds	1,090

UNDER CONSTRUCTION:

16 projects at total cost of	28,145,246.00
Federal contribution	9,781,078.00
New beds to be supplied	1,126

APPROVED, NOT UNDER CONSTRUCTION:

16 projects at a total cost of	28.145,246.00
Federal contribution	9,781,078.00
New beds to be supplied	214

*

An AP news item with a Nashville dateline of March 15th said that preliminary requests for approval under the Hill-Burton Program had been filed by fifteen counties for hospitals and health centers.

University of Tennessee College of Medicine

Dr. Arlis H. Tuttle, research associate in Pediatrics, received a $30,000 grant from the John and Mary R. Markle Foundation in New York City. He is conducting studies on the treatment of hypertension (high blood pressure) in acute nephritis (kidney disease) in children and anemia in premature infants.

Vanderbilt University School of Medicine

Dr. Calvin Woodruff, Instructor in Pediatrics, has received a five-year grant from the John and Mary R. Markle Foundation for the continuation of his research in nutrition in pediatrics.

Murfreesboro V.A. Hospital

On April 3-4, Dr. Kirby S. Howlett, Jr., Assistant Superintendent, Laurel Heights Sanitorium, Shelton, Conn., lectured on: (1) The Diagnosis and Significance of Minimal Pulmonary Tuberculosis and of Pleurisy with Effusion, (2) Evaluation of Pulmonary Lesions Found on Routine Survey Examinations, and (3) The Modern Approach to the Therapy of Pulmonary Tuberculosis.

PERSONAL NEWS

Dr. J. C. Leonard, Lewisburg, has expanded his hospital facilities, including a clinic next door to the hospital which has been completely remodeled. **Dr. William L. Taylor** is associated with Dr. Leonard with both reception rooms located in the new building.

Dr. R. H. Kampmeier, Secretary-Editor of the Association, was elected to the Board of Directors of the Tennessee Hospital Service Association (Blue Cross) recently, succeeding the late Dr. Herbert Acuff, Knoxville.

Dr. E. T. Brading, Johnson City, addressed the local Kiwanis Club recently on "Heart Disease and Its Care." **Dr. Charles Wofford** introduced the speaker.

Dr. H. Jim Brown, Kingsport, addressed the local Junior Service League on "Mental Health" recently. Dr. Brown said that the tri-cities area now has a practicing phychiatrist and that the local medical society hoped that a mental health clinic could be established.

Dr. W. G. Rhea, Paris, is the new chairman of the Henry County Red Cross Defense Blood Program. Serving with Dr. Rhea are **Drs. R. Graham Fish** and **Henrietta Veltman.**

Dr. R. C. Sexton, Knoxville, addressed the East Tennessee Society of Medical Technologists at their March meeting on "Hematology." The Society met in the assembly hall of the Knoxville Academy of Medicine.

Dr. Jere Crook, Jackson, continues to improve after suffering a heart attack several weeks ago. He is now spending some time in his office daily.

Recent diplomates of the American Board of Surgery are: **Dr. George Howard McSwain**, son of Dr. and Mrs. George McSwain, Paris; **Dr. Merton Baker**, and **Dr. Gus J. Vlasis** of Chattanooga.

BOOK REVIEW

Problems of Infancy and Childhood. Milton J. E. Senn, M.D., Editor, New York. Josiah Macy, Jr., Foundation. 1951.

This book is the report of conferences on problems in infancy and childhood held March 6th and 7th in 1950 under the sponsorship of the Josiah Macy, Jr. Foundation. The people who presented the material represented a variety of disciplines and were experts in various fields of child care. The material is divided into three principle sections together with discussions by all of the people on the conference panel.

The first section deals with the relationship between the social structure and the family structure and parental behavior and discusses to some extent its influence on the child. The second section is an objective study of the ontogenetic development of family and social adjustment in various infrahuman animal species. In this section the material is presented to show that much of the so-called instinctive behavior of lower animals is really the result of reaction to physical forces in the environment. The third section of the book deals with the problems of working toward healthy personality. In a sense it is an attempt to design the ideals of healthy personality and to examine to some extent the environment and its relationship to this development.

This interesting little booklet does not solve problems it merely sets out to define problems and it provides food for thought to all who have to deal with the education and health of children. As an exploration and a forerunner as to the agenda for the Mid-Century White House Conference it will have profound effect on the program of child care in the next dozen years.

J. C. PETERSON, M.D.

* * *

Problems of Aging. Transactions of the Thirteenth Conference. Edited by Nathan W. Shock, New York, 1951. Josiah Macy, Jr., Foundation. 194 pages. Price $4.00.

This book contains the proceedings of the Conference on Problems of Aging. The panel on the conference is made up of thirty-three men prominent in their respective fields of medicine, basic science and sociology.

The subjects covered at this thirteenth conference included the Endocrine Aspects of Aging, Cardiovascular Aspects of Aging, Aging of the Integumentary System and the Biology of Cell Division. Sociologic aspects of the aged came up for discussion under a Summary of Activities of Federal Agencies.

The plan of the conference is the introduction of a subject with then free discussion by members of the panel. This makes for an interesting and free exchange of ideas. To the reader such an approach is stimulating and provocative of thinking.

R. H. K.

* * *

Adrenal Cortex. Transactions of the Second Conference (Nov. 16-17, 1950). Elaine P. Ralli, Ed. Josiah Macy, Jr., Foundation. 1951.

This small monograph, although highly technical in certain respects, is an extremely informative summation of the current (1950) problems related to the investigation of adrenocortical function, the mechanism of regulation thereof and the study of certain of the effects of adrenal steroid hormones. The liberal discussion by the participating investigators promotes the exchange of concepts which have a surprisingly direct bearing upon adrenal disease and the use of ACTH and adrenocortical steroids in man.

B. T. Towery, M.D.

LOCATION WANTED

Location Wanted

A twenty-seven year old physician desires a location for general practice. He completed a rotating internship at John Gaston Hospital in Memphis on November 1, 1951 and has located temporarily as an industrial physician at Oak Ridge.

He writes as follows: "I am married, have one child. I am a veteran of World War II with 31 months' service, 19 months of which was spent overseas. My draft classification is 5-A. I am licensed in Tennessee and would prefer a location in East Tennessee, my birthplace being Knoxville. However, I am open to any location where the need is greatest. I appreciate your sincere interest."

LW-2

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself.

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

*

A physician desiring a location in Tennessee writes as follows:

"I am 31, married, with three children, a native of Kentucky even though born in Chattanooga, and had 41 months of service in the Marine Air Corps during World War II. I graduated from Washington University in St. Louis in 1950 and served a rotating internship at St. Louis City Hospital from July 1, 1950, to July 1, 1951. At present I am taking a rotating residency at the charity hospital here in Monroe, Louisiana. The training here has a very large surgical component. My year here will be up June 30 and I will want to go into practice immediately thereafter."

LW-8

*

A physician desiring a location in Tennessee sends us the following information: Age, 32. Married, Graduate, Tulane Schol of Medicine. Internship, Baptist Hospital Memphis, Tenn. Rotating Residency, Baptist Hospital, Birmingham, Alabama. Two years army service, three years general practice and assistant to an F.A.C.S. He states that he would be available on six weeks notice and would prefer a town with a hospital.

LW-9

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

*

The following letter has been received in this office:

"The Midland Community Improvement Club has built a medical center and now desires the services of a reputable doctor.

"This building has two offices, a waiting room, toilet and supply room, has oil heat, hot and cold running water, refrigerator and the equipment of the late Dr. V. S. Campbell of Murfreesboro, all of which will be furnished free of charge to a doctor willing to take charge.

"Midland is a rural community located midway between Murfreesboro and Shelbyville, fifteen miles from each place and the nearest doctors.

"We will appreciate any help you can give us in securing a doctor.

"For further information please contact the undersigned:

"Sincerely yours,
James I. Williams
Fosterville, Tennessee"

PW-9

*

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville, Tennessee.

ANNOUNCEMENTS

HOUSING THE AGING is the topic for the University of Michigan Fifth Annual Conference on Aging to be held in Ann Arbor, Michigan, July 24-26, 1952.

The three-day conference will consider the housing needs of healthy, chronically ill, confused, and infirm older people living in urban and rural areas. Among the topics to be discussed are types of housing and living arrangements; architectural designs and costs; hygiene and safety standards; social and economic aspects of housing; and auxiliary services. The conference is designed to serve as a forum for interchanging information and for getting action on the difficult problem of financing housing for the aging.

The conference is directed to national, state, and local planners; physicians, nurses, and public health workers; industrial retirement counselors; welfare and social work personnel; architects, builders, realtors; safety and sanitary engineers; public and private investment and financing agencies; directors of old age homes, nursing homes, hospitals, and housing projects; and to older people themselves who are interested in contributing to the solution of the housing problem of the aging.

The conference is under the co-sponsorship of the Institute for Human Adjustment, Schools of Architecture, Business Administration, Social Work, Public Health, and the Medical School, Extension Service and Summer Session of the University of Michigan; the Michigan State Medical Society; and the Committee on Aging and Geriatrics of the Federal Security Agency, Washington, D. C.

Conference registration materials may be obtained by writing to Dr. Wilma Donahue, Institute for Human Adjustment, Room 1510, Rackham Bldg., Ann Harbor, Michigan.

*

TEACHING FELLOWSHIPS are available in the Division of Chemistry, University of Tennessee School of Biological Sciences in Memphis, Dr. T. P. Nash, Jr., chief of the division, announced yesterday.

The fellowships are offered to qualified graduate students who will be candidates for the master's degree or the doctorate in biochemistry. Appointments are for 10 months, beginning September 1. Further information may be obtained from Dr. Nash, the University of Tennessee, 874 Union Avenue, Memphis, 3, Tenn.

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John Walter Oursler, Humboldt (1952)

Legislative and Public Policy

C. M. Hamilton, Chairman, Nashville (1953)
Frank Harris, Chattanooga (1952)
H. L. Pope, Knoxville (1954)
T. R. Ray, Shelbyville (1952)
James Stanford, Memphis (1953)
R. H. Kampmeier, *ex officio*, Nashville
Ernest G. Kelly, *ex officio*, Memphis

Liaison

J. O. Manier, Chairman, Nashville (1953)
Joel J. Hobson, Memphis (1952)
John B. Steele, Chattanooga (1954)
Kyle C. Copenhaver, Knoxville (1955)
Carl E. Adams, Murfreesboro (1954)

Insurance

B. F. Byrd, Sr., Chairman, Nashville
H. B. Gotten, Memphis (1953)
Kyle C. Copenhaver, Knoxville (1952)

Medical Education

W. C. Chaney, Chairman, Memphis (1954)
John M. Lee, Nashville (1954)
Carroll H. Long, Johnson City (1952)
R. C. Robertson, Chattanooga (1952)
Emmett Hall, Memphis (1953)
D. C. Seward, Nashville (1952)
R. B. Wood, Knoxville (1953)

Memoirs

Henry L. Douglass, Chairman, Nashville (1953)
J. C. Pearce, Jackson (1954)

Postgraduate Instruction

W. C. Colbert, Chairman, Memphis
James M. Bethea, Memphis
Edward T. Brading, Johnson City
Robert M. Finks, Nashville
A. M. Patterson, Chattanooga
Harold Boyd, Memphis
Carrol Turner, Memphis
Bart N. White, Murfreesboro
John B. Youmans, Nashville

Cancer

C. H. Heacock, Chairman, Memphis (1953)
R. N. Buchanan, Jr., Nashville (1952)
C. S. McMurray, Nashville (1954)
Stanton S. Marchbanks, Chattanooga (1953)
Ralph H. Monger, Knoxville (1952)
R. L. Sanders, Memphis (1954)

General Practice

C. B. Roberts, Chairman, Sparta (1952)
J. Paul Baird, Dyersburg (1953)
Estill L. Caudill, Jr., Elizabethton

Emergency Medical Service

James C. Gardner, Chairman, Nashville
W. C. Dixon, *ex officio*, Nashville
Joe L. Raulston, Jr., Fountain City
W. J. Sheridan, Chattanooga
James E. Wilson, Memphis
J. R. Thompson, Jr., Jackson

Industrial Health

Jean S. Felton, Chairman, Oak Ridge (1954)
Bedford T. Otey, Memphis (1953)
J. H. Sayers, Nashville (1952)

Prepaid Insurance

N. S. Shofner, M.D., Acting Chairman, Nashville
John T. O'Connor, Knoxville
Clyde York, Columbia
R. H. Peoples, Memphis
R. B. Wood, M.D., Knoxville
J. P. Sloan, M.D., Jamestown
Joseph W. Johnson, Jr., M.D., Chattanooga
W. C. Chaney, M.D., Memphis

Executive Subcommittee

Maclin Davis, Chairman, Nashville
N. S. Shofner, M.D., Nashville
D. W. Smith, M.D., Nashville
Charles L. Cornelius, Sr., Nashville
R. H. Kampmeier, M.D., Nashville

Public Service

L. W. Edwards, Chairman, Nashville (1954)
H. L. Monroe, Erwin (1953)
C. C. Smeltzer, Knoxville (1952)
W. A. Garrott, Cleveland (1954)
Thurman Shipley, Cookeville (1953)
W. K. Owen, Pulaski (1952)
W. N. Cook, Columbia (1954)
J. R. Thompson, Jr., Jackson (1953)
Paul Baird, Dyersburg (1952)
Harold Boyd, Memphis (1954)

Members State-at-Large

J. O. Manier, Nashville (1953)
C. B. Roberts, Sparta (1952)
W. C. Chaney, Memphis (1954)
R. B. Wood, Knoxville (1953)
J. Marsh Frere, Chattanooga (1952)

Executive Subcommittee

L. W. Edwards, Nashville (1954)
J. O. Manier, Nashville (1953)
Charles C. Trabue IV, Nashville (1952)

Liaison Committee to the United Mine Workers of America

B. M. Overholt, Chairman, Knoxville (1952)
Cecil E. Newell, Chattanooga (1953)
J. S. Hall, Clinton (1954)

Advisory Committee to Woman's Auxiliary

Clyde Croswell, Chairman, Memphis
Robert M. Finks, Nashville
W. W. Potter, Knoxville
Moore J. Smith, Jr., Chattanooga

Veterans Affairs*

H. H. Shoulders, Chairman, Nashville
L. W. Edwards, Nashville
Kyle C. Copenhaver, Knoxville
W. C. Chaney, Memphis
E. G. Kelly, Memphis

Rural Health Committee

William N. Cook, Chairman, Columbia (1954)
Rae B. Gibson, Greeneville (1954)
James S. Hall, Clinton (1953)
Henry T. Kirby-Smith, Sewanee (1952)
Thayer Wilson, Carthage (1954)
Frank H. Booher, Lynchburg (1953)
James A. Loveless, Gallatin (1952)
Hunter Steadman, Henderson (1953)
John L. Armstrong, Somerville (1952)
J. T. Carter, Germantown (1954)

Grievance Committee

H. W. Qualls, Chairman, Memphis (1952)
N. S. Shofner, Nashville (1953)
Ralph Monger, Knoxville (1954)

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*Veterans Affairs Committee retained on a stand-by basis.

OFFICERS OF THE TENNESSEE STATE MEDICAL ASSOCIATION

President—E. G. Kelly, M.D., 899 Madison Avenue, Memphis

President-Elect—Daugh W. Smith, M.D., 240 Doctors Building, Nashville

Vice-President—Julian K. Welch, Jr., M.D., Brownsville

Vice-President—C. B. Roberts, M.D., Sparta

Vice-President—Louis A. Killeffer, M.D., Harriman

Secretary-Editor—R. H. Kampmeier, M.D., Vanderbilt University Hospital, Nashville

Executive-Secretary—V. O. Foster, 504 Doctors Building, Nashville

TRUSTEES

Daugh W. Smith, M.D., Chairman and Treasurer, 240 Doctors Building, Nashville (1952)

C. C. Trabue IV, M.D., 104 Twentieth Avenue, North, Nashville

A. M. Patterson, M.D., 546 McCallie Avenue, Chattanooga (1953)

Carrol C. Turner, M.D., 899 Madison Avenue, Memphis (1954)

Ralph H. Monger, M.D., 605 Medical Arts Building Knoxville

SPEAKER OF THE HOUSE

C. C. Trabue IV, M.D., Nashville

COUNCILORS

First District—L. E. Dyer, M.D., Greeneville (1952)

Second District—Kyle C. Copenhaver, M.D., Knoxville (1953)

Third District—W. J. Sheridan, M.D., Chattanooga (1952)

Fourth District—Myrtle Lee Smith, M.D., Livingston (1953)

Fifth District—Taylor Farrar, M.D., Shelbyville (1952)

Sixth District—D. C. Seward, M.D., Nashville (1953)

Seventh District—C. D. Walton, M.D., Mount Pleasant (1952)

Eighth District—Jere L. Crook, M.D., Jackson (1953)

Ninth District—J. Paul Baird, M.D., Dyersburg (1952)

Tenth District—Arthur R. Porter, Jr., M.D., Memphis (1953)

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

W. C. Chaney, M.D., Memphis (1953)
R. B. Wood, M.D., Knoxville (1952)
C. M. Hamilton, M.D., Nashville (1953)

Alternates—

Harold B. Boyd, M.D., Memphis (1953)
Edward T. Newell, M.D., Chattanooga (1952)
R. H. Kampmeier, M.D., Nashville (1953)

PRESIDENTS AND SECRETARIES OF COUNTY MEDICAL SOCIETIES

Anderson and Campbell Counties
J. S. Hall, Clinton, Pres.
R. C. Pryse, La Follette, Sec'y.

Bedford County
Sara Womack, Shelbyville, Pres.
Carl Rogers, Shelbyville, Sec'y.

Blount County
James N. Proffitt, Maryville, Pres.
W. N. Dawson, Maryville, Sec'y.

Bradley County
James C. Lowe, Cleveland, Pres.
Charles S. Heron, Cleveland, Sec'y.

Cocke County
Fred Valentine, Newport, Pres.
Glen Shults, Newport, Sec'y.

Consolidated Medical Assembly of West Tennessee
Julian K. Welch, Jr., Brownsville, Pres.
S. M. Herron, Jackson, Sec'y.

Cumberland County
Paul A. Ervin, Crossville, Pres.
A. M. Taylor, Crossville, Sec'y.

Davidson County
Hollis Johnson, 2122 West End, Nashville, Pres.
Wm. G. Kennon, Jr., 1912 Hayes Street, Nashville, Sec'y.
Jack E. Ballentine, 647 Doctors Building, Nashville, Exec. Sec'y.

Dickson County
W. A. Crosby, Dickson, Pres.
Mary Baxter Cook, Charlotte, Sec'y.

Dyer, Lake, and Crockett Counties
Jack R. Holifield, Tiptonville, Pres.
W. T. Rainey, Tiptonville, Sec'y.

Fentress County
Guy C. Pinckley, Jamestown, Pres.
J. Peery Sloan, Jamestown, Sec'y.

Franklin County
E. W. Kirby-Smith, Sewanee, Pres.
George L. Smith, Winchester, Sec'y.

Giles County
J. U. Speer, Pulaski, Pres.
W. K. Owen, Pulaski, Sec'y.

Greene County
J. G. Hawkins, Greeneville, Pres.
Robert S. Cowles, Jr., Greeneville, Sec'y.

Hamblen County
Sam Sullenberger, Dandridge, Pres.
R. A. Purvis, Morristown, Sec'y.

Hamilton County
Fred E. Marsh, Interstate Building, Chattanooga, Pres.
R. G. Demos, Interstate Building, Chattanooga, Sec'y.

Henry County
Isaac Jones, Paris, Pres.
Horace McSwain, Paris, Sec'y.

Humphreys County
J. C. Armstrong, Waverly, Pres.
H. C. Capps, Waverly, Sec'y.

Jackson County
W T. Anderson, Gainesboro, Pres.
R. C. Gaw, Gainesboro, Sec'y.

Knox County
J. B. Naive, Beverly Hills Sanitarium, Knoxville, Pres.
Ralph H. Monger, Medical Arts Building, Knoxville, Sec'y.

Lauderdale County
J. R. Lewis, Ripley, Pres.
James L. Dunavant, Ripley, Sec'y.

Lawrence County
M. L. Weathers, Loretto, Pres.
V. L. Parrish, Loretto, Sec'y.

Lincoln County
J. V. McRady, Fayetteville, Pres.
R. E. McCown, Fayetteville, Sec'y.

Macon County
Max E. Painter, Lafayette, Pres.
John R. Smith, Lafayette, Sec'y.

Maury County
Edwin K. Provost, Columbia, Pres.
James B. Miller, Columbia, Sec'y.

McMinn County
Jess A. Powell, Jr., Athens, Pres.
Charles T. Carroll, Athens, Sec'y.

Monroe County
R. C. Kimbrough, Madisonville, Pres.
D. F. Heuer, Sweetwater, Sec'y.

Montgomery County
Edward R. Atkinson, Clarksville, Pres.
Sam N. Doane, Jr., Clarksville, Sec'y.

Obion County
R. M. Darnall, Union City, Pres.
H. W. Calhoun, Union City, Sec'y.

Overton County
A. B. Qualls, Livingston, Pres.
Myrtle Lee Smith, Livingston, Sec'y.

Putnam County
J. T. DeBerry, Cookeville, Pres.
Thurman Shipley, Cookeville, Sec'y.

Roane County
Stratton Jones, Harriman, Pres.
William P. Hardy, Oak Ridge, Sec'y.

Robertson County
John S. Hawkins, Springfield, Pres.
John S. Freeman, Springfield, Sec'y.

Rutherford County
William Shacklett, Murfreesboro, Pres.
S. C. Garrison, Murfreesboro, Sec'y.

Scott County
D. T. Chambers, Norma, Pres.
Milford Thompson, Oneida, Sec'y.

Sevier County
Ralph Shilling, Gatlinburg, Pres.
R. A. McCall, Sevierville, Sec'y.

Shelby County
Henry B. Gotten, 1412 Madison Avenue, Memphis, Pres.
J. Malcolm Aste, 188 South Bellevue, Memphis, Sec'y.
Battle Malone II, 188 South Bellevue, Memphis, Treas.

Smith County
Thayer S. Wilson, Carthage, Pres.
L. R. Sloan, Carthage, Sec'y.

Sullivan and Johnson Counties
Hyatt Brown, Kingsport, Pres
Charles Harkrader, Jr., Bristol, Sec'y.

Sumner County
Albert G. Dittes, Portland, Pres.
William B. Farris, Gallatin, Sec'y.

Tipton County
N. L. Hyatt, Covington, Pres.
H. Stirl Rule, Covington, Sec'y.

Washington-Carter-Unicoi Counties
J. R. Bowman, Johnson City, Pres.
John M. Wilson, Johnson City, Sec'y.

Weakley County
M. R. Beyer, Dresden, Pres.
V. C. Fagan, Greenfield, Sec'y.

White, Warren, and Van Buren Counties
Harold Andrews, Sparta, Pres.
J. Franklin Fisher, Sparta, Sec'y.

Williamson County
Louis Zeidherg, Franklin, Pres.
Adolphus Bray, Franklin, Sec'y.

Wilson County
Phillips Turner, Lebanon, Pres.
R. C. Kash, Lebanon, Sec'y.

Journal of the Tennessee State Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 45 MAY, 1952 Number 5

An Abstract of Proceedings of the House of Delegates of the Tennessee State Medical Association

Knoxville, April 7-8-9, 1952

FIRST SESSION, MONDAY, APRIL 7

The House was called to order by Speaker Charles C. Trabue, IV, at 9:00 a.m. in the Ballroom of the Andrew Johnson Hotel, Knoxville. Dr. Kyle C. Copenhaver, Chairman of the Credentials Committee, reported a quorum present. The minutes as abstracted and published in the JOURNAL of the two previous sessions of the House were approved as published.

After the approval of the minutes from the last sessions, the Speaker announced the following reference committees:

Credentials

Kyle C. Copenhaver, Chairman
J. B. Black
W. E. Anderson

Amendments to the Constitution and By-Laws

James C. Gardner, Chairman
Charles C. Smeltzer
J. Ray Smith

Resolutions

William D. Stinson, Chairman
John B. Youmans
W. A. Garrott

Reports of Officers

Moore J. Smith, Chairman
Clifford D. Giles
Sam L. Raines

Reports of Committees

Harold B. Boyd, Chairman
Dana Nance
J. P. Sloan

Outstanding General Practitioner Award

(Secret)

The House then went into the consideration of amendments which had lain on the table from the previous year. The following amendments were adopted:

Amendment to Section I, Article VIII, of the Constitution

Section 1, Article VIII, of the Constitution was amended as follows:

"It is proposed to amend Section 1, Article VIII, of the Constitution so as to read as follows:

"The officers of the Association shall be a President, President-Elect, a Vice-President for each of the three grand divisions of the state, a Secretary-Editor, five Trustees, ten Councilors, a Speaker of the House of Delegates, and a Vice-Speaker of the House of Delegates."

Amendment to the By-Laws

Section 2, Chapter V, of the By-Laws was amended by striking the first sentence therefrom and substituting the following:

"On the first day of the annual session, the Speaker of the House shall appoint three temporary chairmen to preside over the assembled delegates of each of the three grand divisions of the State until a chairman is elected to conduct the procedures of selection of three delegates from each of the three respective divisions, to serve as a committee on nominations, no two of whom shall be from the same county."

"The remainder of Section 2 to remain as written."

Introduction of Amendments

The Speaker then called for introduction of new amendments to the Constitution or By-Laws, stating that the amendments were to be read and would be referred to the Reference Committee on Amendments. Dr. Ben Fowler of Nashville introduced an amendment to create a Committee on Physical Therapy.

Introduction of Resolutions

The Speaker called for the introduction of resolutions, stating that the resolutions were to be read and would be referred to the Reference Committee on Resolutions.

Dr. R. H. Monger, Knoxville, introduced a resolution providing for the creation of a Tennessee Medical Foundation.

Dr. Ralph O. Rychener, Memphis, introduced a resolution on the training period for student nurses.

Dr. Daugh W. Smith, Nashville, introduced a resolution which would authorize an operational budget for the Public Service Department of the Association.

Dr. William D. Stinson, Memphis, introduced a resolution approving a recent action of the Association of American Medical Colleges in condoning "abuses" in the handling of non-service-connected disabilities in VA hospitals.

Dr. W. J. Sheridan, Chattanooga, introduced a resolution endorsing a proposed legislative act which regulates and licenses the operation of ambulances in the State of Tennessee.

Reports of Officers

The next order of business was the reports of officers. Reports were read by President Ernest G. Kelly of Memphis; Secretary-Editor R. H. Kampmeier of Nashville; Chairman of the Board of Trustees, Dr. Daugh W. Smith of Nashville; Chairman of the Council, Dr. Kyle C. Copenhaver; and the Executive Secretary, Mr. V. O. Foster of Nashville. These reports were referred to the Reference Committee on Reports of Officers.

The President-Elect, Dr. Daugh W. Smith, stated that his inaugural address on Tuesday evening would constitute his report as President-Elect. This address was published in the April, 1952, issue of the JOURNAL.

These reports are abstracted on pages 186-191 of the JOURNAL.

Special Reports

The next order of business was special reports. These were as follows: Report of the President of the Woman's Auxiliary, by Mrs. Lynch Bennett of Nashville, report of the A.M.A. Delegation by Dr. R. B. Wood of Knoxville, and a special Postgraduate Evaluation Committee report was read by Dr. Carrol C. Turner of Memphis.

Reports of Committees

The next order of business was the reports of committees of the Association. The following reports were made:

Scientific Work and Editorial Board—R. H. Kampmeier, Chairman
Hospitals (No report)
Legislative and Public Policy—C. M. Hamilton, Chairman
Liaison (Public Health Department)—J. O. Manier, Chairman
Insurance—B. F. Byrd, Chairman
Medical Education—W. C. Chaney, Chairman
Memoirs—Henry Douglass, Acting Chairman
Postgraduate Instruction—W. C. Colbert
Cancer—C. H. Heacock, Chairman
General Practice—C. B. Roberts, Chairman
Emergency Medical Service—James C. Gardner, Chairman
Industrial Health—Jean S. Felton, Chairman
Prepaid Insurance—N. S. Shofner, Acting Chairman
Public Service—L. W. Edwards, Chairman
Liaison Committee to the U. M. W. A.—B. M. Overholt, Chairman
Advisory Committee to the Woman's Auxiliary—Clyde Croswell, Chairman
Veterans Affairs—H. H. Shoulders, Chairman
Rural Health—William N. Cook, Chairman
Grievance Committee—H. W. Qualls, Chairman

The committee reports were referred to the Reference Committee on Reports of Committees. *These reports are abstracted on pages 191-194 of the* JOURNAL.

Nominating Committee

The delegates from the three grand divisions went into conference and elected the Nominating Committee composed of nine members, as follows:

East Tennessee—H. L. Monroe, Erwin
Roy McDonald, Knoxville
Hiram Laws, Chattanooga
Middle Tennessee—C. B. Roberts, Sparta
T. F. Booth, Pulaski
R. H. Hutcheson, Nashville
West Tennessee—J. R. Thompson, Jr., Jackson
Arthur R. Porter, Jr., Memphis
J. Paul Baird, Dyersburg

AFTERNOON SESSION

The afternoon session was called to order at 1:30 p.m. and was followed immediately by the introduction of fraternal delegates and distinguished guests.

Report of Reference Committee on Reports of Officers

Dr. Moore J. Smith, Jr., Chattanooga, Chairman of the Reference Committee on Reports of Officers submitted the following report:

"*Report of the President:* The report of Dr. Ernest G. Kelly, President of the Tennessee State Medical Association, sets forth his activities during the year. Visits to the component county societies by the head of the State Association are particularly stimulating to the local activities. Acceptance of his report is recommended.

"*The report of the President-Elect and Chairman of the Board of Trustees* happens in this case to be the same man. The report of Dr. Daugh W. Smith, President-Elect and Chairman of the Board of Trustees, indicates much conscientious consideration of the varied problems which have come before the Board. Each item listed in the report was considered by this reference committee, and it is felt that the Board of Trustees should be commended for its work, and that Dr. Daugh W. Smith be commended for the detailed and yet concise report which he has rendered. Acceptance of his report is recommended.

"*The report of Dr. R. H. Kampmeier, Secretary-Editor*, indicates the continued improvement of the Tennessee State Medical JOURNAL. The increased size of the JOURNAL, consisting of more scientific articles, more advertising pages, and a balance of non-scientific material, has been very apparent and gratifying.

"This Committee wishes to follow the lead of last year's committee in expressing appreciation for the good quality of Dr. Kampmeier's continued activity. Acceptance of his report is recommended.

"*Report of the Chairman of the Council:* The report of Dr. Kyle C. Copenhaver, Chairman of the Council, reflects the general status of the component county societies as to membership, organization, and attendance. It reminds us all of the importance of all the Councilors in maintaining interest, especially in counties where membership is sparse. The report reflects Dr. Copenhaver's detailed acquaintance with their problems. Acceptance of his report is recommended.

"*The report of the Executive Secretary.* Report of Mr. V. O. Foster, the Executive Secretary, recounts very briefly the responsibilities of his office, and the manner in which they are discharged is reflected by the lucidity of his report. Mr. Foster is to be congratulated on his comprehensive coverage of his fields. Acceptance of his report is recommended."

The Chairman of the Reference Committee then moved the report of the Reference Committee on Reports of Officers as a whole be adopted. It was duly adopted.

Report of Reference Committee on Reports of Committees

The next order of business was the report of the Reference Committee on Reports of Committees. Dr. Harold Boyd, Memphis, Chairman, tendered the following report on reports of committees:

"Committee on Scientific Work and Editorial Board: We recommend the adoption of this report, with commendation.

"Committee on Hospitals: No report.

"Committee on Legislative and Public Policy: We recommend the adoption of this report with recommendation. We recommend that the criteria for indigency be investigated carefully.

"Committee on Liaison: We recommend the adoption of this report, and are pleased that the relationship with the Public Health

Department is such that this committee has been relatively inactive.

"Committee on Insurance: We recommend the adoption of this report.

"Committee on Medical Education: We recommend the adoption of this report.

"Committee on Memoirs: We recommend the adoption of this report.

"Committee on Postgraduate Instruction: We recommend the adoption of this report.

"Committee on Cancer: We recommend the adoption of this report.

"Committee on General Practice: We recommend the adoption of this report.

"Committee on Emergency Medical Service: We recommend the adoption of this report with commendation. They have done a lot of hard work in a field that it is not easy to stimulate interest.

"Committee on Industrial Health: We recommend the adoption of this report.

"Committee on Prepaid Insurance: We recommend the adoption of this report with the recommendation that the $4,200.00 ceiling refer to the total family income, and not be limited to that of the principal wage earner. That was not so stated in the report of the Committee, but it was so stated in the resolution which was introduced later.

"Committee on Public Service: We recommend the adoption of this report, with commendation, and strongly urge approval of the recommendations made by the Committee.

"Committee on Liaison, United Mine Workers of America: We recommend the adoption of this report.

"Advisory Committee to Woman's Auxiliary: We recommend the adoption of this report."

(The Committee reported out the remainder of the Committee reports at the Wednesday morning session.)

The report of the Reference Committee on Reports of Committees was then adopted as a whole.

Report of Reference Committee on Amendments

The next order of business was the report of the Reference Committee on Amendments. Dr. Gardner, Chairman, stated that the only amendment offered during the morning session would have to lie on the table until Wednesday and would be reported out at that time.

Report of Reference Committee on Resolutions

The Chairman then, with the approval of the House, stated that an error had been made in the agenda and called for a report from the Reference Committee on Resolutions. Dr. William D. Stinson of Memphis, Chairman of the Committee, tendered the following report:

Extension of the Postgraduate Training Program

"Resolved: That an extension program in postgraduate training be continued in the State."

Upon motion duly made and seconded, the resolution was adopted.

Increasing Family Income Limit on Tennessee Plan

"Be it resolved that the House of Delegates approve the raising of income limits for the Tennessee Plan from $3,600 to $4,200 for total family income."

The resolution was discussed by Doctors Youmans, Shofner, and others, and upon motion and second was duly adopted.

Training Period of Student Nurses

"Be it resolved that the House of Delegates go on record as approving a two-year or less course of study for the training of nurses, that this period be devoted more strictly to nursing duties, and that the University of Tennessee School of Nursing be requested to inaugurate a pilot-course based on these principles for comparison with the now-required curriculum."

Upon motion duly made and seconded, the resolution was adopted.

Operating Budget for Public Service Department

"Be it resolved by the House of Delegates of the Tennessee State Medical Association assembled in regular annual session at Knoxville, Tennessee, on April 7, 1952, that:

"1. The Board of Trustees of the Association be authorized and directed to set up and allocate for the use of the 'Public Service Committee of the Association,' created pursuant to a resolution adopted by the House of Delegates at its special session on May 13-14, 1950, at Nashville, Tennessee, a separate budget designed to meet the expenses of the Public Service Committee and that the funds thus set apart by such separate budget shall be subject to expenditure by the Public Service Committee and also subject to separate audit and report to the Board of Trustees.

"2. The staff of the Public Service Committee shall be permitted to use, jointly with the Executive Secretary of the Tennessee State Medical Association, the offices of the State Association and any and all equipment which can be conveniently used jointly for the sake of economy, the details of such joint use to be arranged by the Public Service Committee and the Board of Trustees of the Association."

Upon motion duly made and seconded, the resolution was adopted.

Approval of Action of the Association of American Medical Colleges

"Whereas, the hospital and medical care of the veteran with service connected disability or disease and the care of the medically indigent veteran with non-service connected disability or disease is and should be the just concern of the public and the medical profession; and

"Whereas, the free care of the veteran with non-service connected disability or disease who can pay for his hospitalization and medical care is contrary to our traditional system of government and is an unwarranted burden on the taxpayer and threatens the quality of care to the deserving veteran by overloading the professional services of Veterans Hospitals; and

"Whereas, the Association of American Medical Colleges at its 195th annual meeting called attention to this abuse in relation to so-called Dean's Hospitals and recommended that the medical schools concerned ascertain the extent of this abuse and the reasons for it and take steps to correct it;

"Therefore, be it resolved that this House of Delegates strongly commends and supports the action of the Association of American Medical Colleges and directs the Executive Secretary of this Association to inform the other constituent medical associations of the United States of America of this action. And furthermore, that this House goes on record as directing its delegates to the American Medical Association to further the action of the Association of American Medical Colleges in every way possible."

Upon motion duly made and seconded, the resolution was adopted.

The Chairman, because of the shortage of time, requested the Chairman of the Reference Committee on Resolutions to complete his report at the Wednesday morning session.

Report of the Reference Committee on G.P. Award

The Chair then called for a report of the Reference Committee on the General Practitioner Award and announced the members of the Reference Committee, which until this time had remained secret. The members were Dr. Ralph H. Monger, Dr. N. S. Shofner, and Dr. H. W. Qualls, the three immediate past presidents.

Upon motion duly made and seconded, the House went into executive session. Dr. Monger, Chairman of the Reference Committee, submitted the following candidates: Dr. G. D. LeQuire, Maryville; Dr. R. K. Landis, Nashville; and Dr. Kelly Smythe, Bemis. Dr. W. N. Dawson, Secretary of the Blount County Medical Society, made a nominating speech in favor of Dr. G. D. LeQuire. Dr. Jack Thompson, Jackson, made a nominating speech in favor of Dr. Kelly Smythe.

Following the balloting, the Speaker announced the following vote: Dr. G. D. LeQuire, 41; Dr. Kelly Smythe, 18; Dr. R. K. Landis, 2. Dr. LeQuire was declared duly elected the Outstanding General Practitioner of the Year for Tennessee for the year 1952.

Election of Councilors

The Chairman then called for a report of the Nominating Committee for the purpose of electing Councilors for the first, third, fifth, seventh, and ninth districts. Dr. Jack Thompson, reporting for the Committee, placed the following names in nomination:

First District—H. L. Monroe, Erwin
Third District—W. J. Sheridan, Chattanooga
Fifth District—Henry T. Kirby-Smith, Sewanee

Seventh District—C. D. Walton, Mount Pleasant

Ninth District—J. Paul Baird, Dyersburg

There being no nominations from the floor, the above Councilors, upon motion duly made and seconded, were elected.

Report on Tennessee State Hearing and Speech Foundation

The Speaker announced that an opportunity would now be given for special reports. Dr. Wesley W. Wilkerson, Jr., of Nashville, gave a brief report on the work of the Tennessee Hearing and Speech Foundation and introduced a resolution calling for the approval of the Foundation's work by the Tennessee State Medical Association. The resolution was referred to the Reference Committee on Resolutions.

Report on Tennessee Tuberculosis Hospitals

Dr. Joe Raulston, Knoxville, gave a report on the operation of the Tennessee Tuberculosis Hospitals. Since the report recommended no action, it was not referred to a reference committee.

Introduction of New Resolutions

The Speaker then called for the introduction of any additional resolutions in order that they could go to the Reference Committee and be reported out during the Wednesday morning session.

Dr. Arthur R. Porter, Jr., of Memphis, introduced a resolution calling for the reduction in the number of meetings physicians are required to attend.

Dr. L. W. Edwards, Nashville, introduced a resolution calling for a continuance of the Committee on Veterans Affairs. The resolution was referred to the Reference Committee on Resolutions.

Dr. Carrol C. Turner of Memphis introduced a resolution discontinuing the Medical Education Committee. (Amendment to the By-Laws.)

Dr. C. M. Hamilton, Nashville, introduced a resolution approving a proposed bill to be introduced at the next session of the Legislature authorizing permissions for autopsies.

Dr. Hamilton introduced a resolution endorsing a proposed act for certifying physical therapists.

Dr. John B. Youmans, Nashville, introduced a resolution relative to payment of hospital costs for cancer patients by the American Cancer Society.

The House was then adjourned until Wednesday morning at nine o'clock, to meet in the Assembly Room of the Knoxville Academy of Medicine.

WEDNESDAY MORNING SESSION

The Speaker called the House to order at 9:00 a.m. and the Chairman of the Credentials Committee, Dr. Kyle C. Copenhaver, reported a quorum present. The Speaker then called for any supplemental reports of officers or committees. None was tendered, and the Speaker then called for reports from the reference committees. The Chairmon of the Reference Committee on Reports of Officers, Dr. Moore J. Smith, stated that their report was complete, and Dr. Harold B. Boyd, Chairman of the Reference Committee on Reports of Committees, stated that his report was complete.

Amendment to the By-Laws

Dr. James C. Gardner, Chairman of the Reference Committee on Amendments, reported out an amendment to Section 1, Chapter VIII, of the By-Laws, an amendment to the By-Laws creating a Committee on Physical Therapy and defining its duties. Said amendment was as follows:

"Part One

"To amend Section 1 of Chapter VIII of said By-Laws by adding the words, 'Committee on Physical Therapy' as Section 10 of said section.

"Part Two

"To amend Chapter VIII of said By-Laws by adding a new Section (11) as follows:

" 'The Committee on Physical Therapy shall cooperate with the Tennessee Chapter of the American Physical Therapy Association, providing such guidance and assistance as will improve the practice of physical therapy in Tennessee; to investigate the standards of this practice and legislation related thereto; and to report its actions and recommendations to each annual session of the House.' "

The amendment was duly adopted.

New Resolutions

The Speaker then called for the introduction of any new resolutions.

Dr. W. G. Kennon, Jr., introduced a resolution calling for endorsement of a proposed Tennessee Ophthalmic Dispensers Bill which is to be introduced in the next session of the State Legislature and moved its adoption. The resolution was referred to the Reference Committee on Resolutions.

Report of Reference Committee on Resolutions

The Speaker then called on Dr. Stinson, Chairman of the Reference Committee on Resolutions for a report. The following resolutions were reported out:

Hearing and Speech Foundation

"Resolved: That the Tennessee State Medical Association approve and encourage the Tennessee State Hearing and Speech Foundation to the end that local centers will be established throughout the state so that adults and children handicapped with hearing and speech defects may receive scientific and adequate remedial care; that professional personnel may be trained in audiology; and that teachers may be qualified to teach these handicapped children in pre-school and primary grades of our schools."

The resolution was duly adopted.

Reducing Number of Hospital Staff Meetings

"Whereas, it has been noted that a Joint Hospital Committee has been formed for the purpose of making recommendations regarding hospital requirements for intern and resident approval; and

"Whereas, a part of this study is to be concerned with the problems of coordinating individual hospital staff meetings; and

"Whereas, the recommendations of this Committee are to be submitted to the House of Delegates of the American Medical Association for approval;

"Be it resolved, that the Delegates of the Tennessee State Medical Association to the American Medical Association be instructed to support any submitted plan or plans which will allow individual staff business meetings to be held jointly or consecutively on the same night each month, thereby reducing the number of meetings each month which must be attended by individual doctors belonging to more than one active hospital staff."

The resolution was adopted.

Financing Hospital Care for Medically Indigent

"Whereas, the financing of hospital care for medically indigent Tennesseans has become a heavy burden for hospitals, the large city and county governments, civic clubs, volunteer welfare organizations, and individuals; and

"Whereas, it is vital that hospital care be provided for all medically indigent Tennesseans who need it; and

"Whereas, members of our Association have provided medical and hospital surgery free for the indigent for 122 years, and will continue to do so; and

"Whereas, many Tennessee county governments do not make provisions to finance hospital care for their indigent; and

"Whereas, the Tennessee State Medical Association sponsored the legislative establishment of a commission to study indigent care, and this commission is now making a survey of needs and methods, and legislation may be introduced next January in the 1953 General Assembly, to provide for state-county financing of hospital care for the medically indigent;

"Be it therefore resolved, that the House of Delegates of the Tennessee State Medical Association go on record in support of legislation to establish a state-county program of paying the hospital bills of the truly medically indigent citizens of this state."

The resolution was duly adopted.

Discontinuing Committee on Medical Education

"Whereas, there is considerable overlapping of functions of the Committee on Postgraduate Education; and

"Whereas, much of the function of the Committee on Medical Education can be and is being handled by the Public Service Committee, the remainder of its duties belonging to the Committee on Postgraduate Education;

"Therefore, be it resolved, that the Committee on Medical Education be discontinued."

The resolution was duly adopted. (To amend the By-Laws.)

Postgraduate Course of Instruction

"Be it resolved, that the postgraduate courses as set up by the Committee on Postgraduate Education and sponsored by the Tennessee State Medical Association be continued and pursued as prescribed under the present setup."

The Committee recommended that this resolution be not adopted since a similar resolution was adopted during the Monday session, and the proposed resolution would be a duplication. **A motion to not adopt the resolution was carried.**

Committee on Veterans Affairs

"Be it resolved by the House of Delegates of the Tennessee State Medical Association:

"1. That the Committee on Veterans Affairs be continued and that it be instructed to carry out the program outlined in the report of the Committee.

"2. That the Association, through proper action by the House or Board of Trustees, make available to the Committee a financial budget for the performance of these duties, and that the Board of Trustees is specifically authorized to make available such funds as may be necessary for the performance of these several duties.

"3. That the Public Relations Department of the State Association be made available to the Committee for the performance of these functions in so far as practical in the performance of other duties."

The Reference Committee on Resolutions recommended that the above resolution be referred to the Board of Trustees. Following discussion by Doctors O. N. Bryan, H. H. Shoulders, N. S. Shofner, W. A. Garrott, D. W. Smith, Henry B. Gotten, and C. M. Hamilton, **the motion to refer the resolution to the Board of Trustees was carried.**

Certifying and Licensing Physical Therapists

"Whereas, there is an increasing need and demand for physical therapy; and

"Whereas, no method of certifying physical therapists is in existence; and

"Whereas, physical therapy augments the practice of medicine rather than conflicts with it; and

"Whereas, the issuance of licenses will be under the supervision of the State Board of Medical Examiners and State Licensing Board;

"Now therefore, be it resolved, that the House of Delegates of the Tennessee State Medical Association endorse the proposed act, which will be introduced in the State Legislature at the next session, a copy of which is attached hereto."

The resolution was adopted.

Authorization for Autopsy

"Whereas, there is no state law on the statute books of Tennessee to define consent to authorize an autopsy; and

"Whereas, this situation frequently makes it impossible to hold an autopsy; and

"Whereas, this failure makes it impossible in many cases to determine the exact cause of death;

"Therefore, be it resolved, that this House of Delegates support a bill, already drafted, which would authorize the person or persons responsible for burial to give permission for autopsy, which bill will be introduced in the next session of the Legislature."

The resolution was duly adopted.

Pay for Hospitalization of Cancer Patients

"Whereas, the increasing requirements and rising cost of medical care endanger the operation of many hospitals and particularly those supported by private donation; and

"Whereas, the care of patients supported by general public contributions of less than cost further imperils the operation of such hospitals;

"Be it resolved, that members of the Cancer Committee of this Association, who are members of the Board of the Tennessee Division of the American Cancer Society, be requested to endeavor to secure the payment of actual cost of hospitalization for such patients as are paid for by the Tennessee Division, American Cancer Society."

The resolution was duly adopted.

Tennessee Medical Foundation

"Be it resolved by the House of Delegates of the Tennessee State Medical Association assembled in annual session at Knoxville, Tennessee, on April 7, 1952, that

"First, the Board of Trustees of the Association be authorized and directed to apply for a charter under the corporation laws of the State of Tennessee for the incorporation of the Tennessee Medical Foundation, with the purposes of such organization to be stated in the application for charter as follows: 'This Foundation is organized and operated exclusively for scientific purposes. Its activities shall be confined to the extension of medical knowledge, the advancement of medical science, the elevation of the standard of medical education, and the prevention and cure of disease. No part of the activities of the Foundation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and no part of the net earnings of the Foundation shall inure to the benefit of any private shareholder or individual.'

"The Board of Trustees be further authorized to pay all expenses incident to the incorporation of the Tennessee Medical Foundation, including all filing and recording fees and all other expenses reasonably incident to such incorporation, making its report thereof to the next annual meeting of the House of Delegates."

The resolution was duly adopted.

Licensing and Regulating Ambulances and Other Vehicles

"Whereas, there is no state law on the statute books of Tennessee to license and regulate the operation and equipment of ambulances and other vehicles commonly used for the transportation of sick and injured persons on the highways and streets of Tennessee; and

"Whereas, improper handling of injured may further contribute to disability of injured persons; and

"Whereas, improper operation of such vehicles in and of themselves may constitute a menace to the injured themselves or to others traveling the streets and highways;

"Therefore, be it resolved, that this House of Delegates support a bill, already drafted, which would license and regulate the operation of such vehicles."

The resolution was adopted.

Group Accident and Sickness Policies for Members of This Association

"Resolved, that the Tennessee State Medical Association approve the group hospital and accident policy submitted by Commercial Casualty Company.

"Be it further resolved, that the Association actively support the Hartnett-Geny Agency in its efforts to enlarge the group."

The resolution was duly adopted.

Endorsing a Proposed Tennessee Ophthalmic Dispensers' Bill

"Whereas, the Tennessee Academy of Ophthalmology and Otolaryngology has endorsed the Tennessee Ophthalmic Dispensers' Bill;

"Therefore, be it resolved, that the House of Delegates of the Tennessee State Medical Association also endorse the proposed Tennessee Ophthalmic Dispensers' Bill, a copy of which is attached to this resolution."

The resolution was duly adopted.

Dr. William D. Stinson, the Chairman, announced that this completes the report of the Reference Committee on Resolutions and moved the adoption of the report as a whole, which was duly carried.

The Reference Committee was thanked and commended for its work.

Amendment to the Constitution

Dr. R. H. Kampmeier introduced the following amendment to Section 1, Article IV, of the Constitution: That the words "student members" be added at the end of said section; also an amendment to Article IV of the Constitution: That a new section, Section 6, be added, as follows:

"A student member is any student regularly and duly enrolled in a medical school in Tennessee and who is a candidate for the degree of Doctor of Medicine."

Dr. Kampmeier stated that this would provide the means by which medical students might be enrolled in local medical societies and become provisional members of the Tennessee State Medical Association.

The Speaker announced that since the proposed amendments were Constitutional amendments, they would have to lie on the table until the next annual meeting.

Appropriation for Veterans Affairs Committee

Dr. C. M. Hamilton moved that the House of Delegates authorize the Board of Trustees to appropriate a sum not to exceed $1,500 to help defray the expenses of the Committee on Veterans Affairs. The motion was seconded by Dr. Hiram Laws, was put to a vote and carried.

Appreciation Expressed to Knoxville Academy

Dr. Kelly moved that the House of Delegates express its gratitude for the wonderful manner in which the Knoxville Academy of Medicine had entertained the Association and called for a rising vote of thanks for the way they handled the convention. (The audience arose and applauded.)

Contributions to Building Fund Deductible

Dr. Daugh W. Smith, Chairman of the Board of Trustees, read the following letter for the information of the House:

"Dear Mr. Foster:

"Receipt is acknowledged of your letter dated April 2, 1952, stating that your Board of Trustees has authorized a volunteer subscription campaign among its members to provide funds to build or purchase its own headquarters building in Nashville. You request to be advised if such contributions would be deductible.

"**It is the opinion of this office that the contributions referred to above would be deductible.** You state that the purpose of the Association is for the advancement of medical education and improvement of public health. You also refer to two organizations of a similar character which have been advised that their contributions to the Association would be deductible under the Internal Revenue Code.

"In view of these statements, it is believed, as stated above, that contributions to your organization will be deductible.

"Yours very truly, C. D. Hayes, Assistant Head, Income Tax Division, Room 107, U. S. Courthouse, Nashville, Tennessee."

The Speaker made the following announcement:

"The Chair has been asked to announce that since our last session one of the members of this House has died. Most of you probably know that Dr. Booth was stricken at the hotel last night and died sometime during the evening. Dr. Booth was a delegate, he was a member of the Nominating Committee, and I understand worked most of the day yesterday on business of the Association. I am sure that we are all grieved at this news."

Selection of Meeting Place for 1953

The Speaker announced that the next order of business was the selection of the meeting place for 1953. Dr. Henry Gotten, Memphis, extended an invitation to the Tennessee State Medical Association to meet in Memphis in 1953. The invitation was applauded and upon motion duly made and seconded, the invitation of the Memphis and Shelby County Medical Society was accepted. (The meeting dates are as follows: April 13-14-15. Headquarters: Peabody Hotel.)

Election of Officers

The Speaker announced that the next order of business was the report of the Nominating Committee and the election of officers. Dr. H. L. Monroe, Erwin, Chairman of the Nominating Committee, presented the following names:

President-Elect

Lee K. Gibson, Johnson City
James S. Hall, Clinton
A. M. Patterson, Chattanooga

There were no nominations from the floor. The Speaker instructed the members to prepare their ballots and stated that it would be necessary to have a majority of the total votes cast, and if there was not a majority on the first vote cast, it would be necessary to take a second ballot.

During the balloting the Speaker appointed a committee headed by Dr. W. A. Garrott to send a message of sympathy to Mrs. T. F. Booth.

The tellers completed the counting of the votes for President, and the Speaker announced the following results: Dr. A. M. Patterson, 49 votes; Dr. Gibson, 9; and Dr. Hall, 2. Dr. Patterson was declared elected President-Elect.

Following applause, Dr. Patterson made the following remarks:

"Mr. Speaker, members of the House of Delegates: First, I want to express my appreciation for the honor you have seen fit to bestow upon me. I consider this the greatest honor that can come to any member of this Association, but I want to assure you that with this honor I am mindful of the responsibility that goes with it. I pledge you that I will keep that uppermost in my mind, and for the coming year I will be available to give my best efforts to cooperate with President Daugh Smith in anything that he assigns to me to make this coming year most successful. Again, I wish to thank you."

Speaker of the House

Dr. Charles C. Trabue, IV, Nashville, the incumbent.

There were no nominations from the floor.

Dr. Gotten of Memphis assumed the Chair to take the vote. Upon motion duly made and seconded, Dr. Trabue was elected Speaker by acclamation.

Vice-Speaker

Dr. Robert N. Buchanan, Jr., Nashville.

There being no nominations from the floor, Dr. Buchanan was elected by acclamation.

Secretary-Editor

Dr. Rudolph H. Kampmeier, Nashville, incumbent.

There were no nominations from the floor, and Dr. Kampmeier was unanimously elected.

Trustee—Middle Tennessee

Dr. James C. Gardner of Nashville.

There being no other nominations, Dr. Gardner was elected unanimously.

Vice-Presidents

East Tennessee—J. B. Naive, Knoxville
Middle Tennessee—O. Reed Hill, Lebanon
West Tennessee—W. E. Anderson, Dyersburg

There were no nominations from the floor, and upon motion duly made and seconded, Doctors Naive, Hill, and Anderson were duly elected Vice-Presidents.

Delegate to the A.M.A.

Dr. R. B. Wood, Knoxville, incumbent.

There being no other nominations, Dr. Wood was duly elected by acclamation for a two-year term, ending December 31, 1954.

Alternate-Delegate to the A.M.A.

Dr. Edward T. Newell, Sr., Chattanooga.

There being no other nominations, Dr. Newell was elected Alternate Delegate unanimously, for a two-year term ending December 31, 1954.

Nominations for Appointment to the Public Health Council

T. R. Ray, Shelbyville
J. U. Speer, Pulaski
J. O. Walker, Franklin

There being no other nominations, Doctors Ray, Walker, and Speer were nominated, one of whom will be appointed by the Governor to fill a vacancy on the Public Health Council.

Board of Trustees, Tennessee Tuberculosis Hospitals

W. J. Sheridan, Chattanooga
W. A. Garrott, Cleveland

There being no other nominations, Doctors Sheridan and Garrott were duly nominated for appointment by the Governor.

Dr. R. H. Hutcheson, Commissioner of Public Health, stated that Governor Browning had requested him to request the House of Delegates to submit some names to the Governor for appointment to vacancies on the Hospital Advisory Committee of the State Hospital Construction Authority (Hill-Burton Hospitals). Dr. Hutcheson moved that the names of the members of the Hospital Committee of this Association be submitted to the Governor for consideration for appointment by him on the Hospital Advisory Committee. The motion was duly made, seconded and carried.

The Speaker then appointed Doctors D. W. Smith, E. G. Kelly, and R. H. Monger to escort the new President-Elect and the three Vice-Presidents to the General Assembly and introduce them on the floor.

The Speaker, after thanking the members of the House for their courteous and careful attention to the business of the Association, stated that unless there was further business a motion to adjourn was in order. The meeting adjourned at 10:15 a.m. sine die.

Abstract of Proceedings of the Board of Trustees Tennessee State Medical Association Knoxville, April 9, 1952

The Board met at 11:00 a.m. with the following members present:

A. M. Patterson, Chattanooga
Charles C. Trabue, IV, Nashville
Carrol C. Turner, Memphis
Ernest G. Kelly, Memphis
James C. Gardner, Nashville
Others present were:
Daugh W. Smith, Nashville, President
R. H. Kampmeier, Nashville, Secretary-Editor
W. C. Colbert, Memphis
V. O. Foster, Executive Secretary, Nashville

Election of Chairman and Treasurer

Dr. Daugh W. Smith presided pending the organization of the Board and the election of a Chairman and Treasurer. Dr. James C. Gardner was nominated for Chairman and Treasurer by Dr. Kelly. There being no other nominations, Dr. Gardner was duly elected and assumed the Chair.

Financial Report

The Executive Secretary presented Board members with a detailed financial operating statement for the year 1951, a copy of the 1952 budget, and a statement of fund conditions as of March 31, 1952. Copies of these exhibits are appended to these minutes.

Postgraduate Committee

Dr. W. C. Colbert, Chairman of the Postgraduate Committee, discussed the desirability of resigning as Chairman, since the next course beginning in September, 1953, is to be in obstetrics. Upon full discussion it was decided, however, that Dr. Frank Whitacre be added to the Postgraduate Committee and that it be understood that he assume the Chairmanship of the Committee during the planning and execution of the next course in obstetrics.

Appropriation for Committee on Veterans' Affairs

Pursuant to a resolution adopted by the House of Delegates which authorized an appropriation *up to* $1,500 to defray the expenses of the Committee on Veterans' Affairs, the following action was taken: Upon motion by Dr. Trabue, the Board appropriated a sum not to exceed $300 for the remainder of the 1952 fiscal year to defray necessary expenses of the Committee, and provided further that the Public Service Director, Mr. Ed Bridges, and the Executive Secretary, V. O. Foster, use their best judgment in determining the amount of help and time which the headquarters staff can provide the Committee, and provided further that the Secretary inform the Chairman, Dr. H. H. Shoulders, of this action.

Budget for Public Service Committee

Following up a resolution adopted by the House, the Board instructed the Executive Secretary, the Public Service Director and the Treasurer to prepare a proposed budget for the Public Service Committee and to mail copies of the proposed budget to Board members by June 30. The same persons were further authorized and instructed to prepare a detailed Public Service Budget for submission to the semi-annual meeting of the Board for adoption for the fiscal year 1953.

Medical Education Foundation

The Chairman of the Board and the Executive Secretary were authorized and instructed to carry out the provisions of the resolution adopted by the House with reference to the establishment of a Medical Education Foundation. The above officers were instructed to apply for a charter of incorporation and to pay the necessary expenses incident thereto.

Blood Bank Committee

Dr. Kelly presented a letter to the Board from Dr. Merlin L. Trumbull requesting that a Committee on Blood Banks be established by this Association. After full discussion of the functions of such a committee, it was moved by Dr. Kelly that a Committee on Blood Banks be created for one year and that the committee report its actions and findings to the next annual session of the House of Delegates. The motion carried and the committee was subsequently appointed.

Committee Appointments

The Board then went into the appointment of expired terms on the various committees of the Association.

Scientific Work and Editorial Board

R. H. Kampmeier, Chairman and Editor-in-Chief, Nashville
Henry B. Gotten, Memphis
B. O. Garner, Union City
Harwell Wilson, Memphis
Helen Johnston, Jackson
R. C. Kimbrough, Jr., Knoxville
White Patton, Chattanooga
H. L. Monroe, Erwin
Addison B. Scoville, Jr., Nashville
W. N. Cook, Columbia

Hospitals

Dr. David W. Hailey, Nashville, was relieved as Chairman and Dr. J. L. Hamilton, of Chattanooga, was reappointed for a three-year term (1955) and designated Chairman of the Committee. Dr. Carrol C. Turner, Memphis, was appointed for a three-year term (1955), succeeding Dr. John Walter Oursler of Humboldt. Dr. David K. Gotwald, Nashville, was added to the Committee with a three-year term (1955). The personnel for this Committee for the next year is as follows:

J. L. Hamilton, Chairman, Chattanooga (1955)
David W. Hailey, Nashville (1953)
W. O. Baird, Henderson, (1954)
A. H. Lancaster, Knoxville (1953)
Ralph H. Monger, Knoxville (1954)
Carrol C. Turner, Memphis (1955)
David K. Gotwald, Nashville (1955)

Legislative and Public Policy

Dr. Frank Harris of Chattanooga was reappointed for a three-year term (1955), and Dr. T. R. Ray was reappointed for a three-year term (1955). Dr. Daugh W. Smith succeeded Dr. Ernest Kelly as an *ex-officio* member of the Committee. The personnel of this Committee is as follows:

C. M. Hamilton, Chairman, Nashville (1953)
Frank Farris, Chattanooga (1955)
H. L. Pope, Knoxville (1954)
T. R. Ray, Shelbyville (1955)
James Stanford, Memphis (1953)
R. H. Kampmeier, *ex officio*, Nashville
D. W. Smith, *ex officio*, Nashville

Liaison (with Public Health Department)

Dr. Joel J. Hobson, Memphis, was reappointed for a three-year term (1955). The personnel of this Committee is as follows:

J. O. Manier, Chairman, Nashville (1953)
Joel J. Hobson, Memphis (1955)
John B. Steele, Chattanooga (1954)
Kyle C. Copenhaver, Knoxville (1955)
Carl E. Adams, Murfreesboro (1954)

Insurance

Dr. Kyle C. Copenhaver was reappointed to the Committee for a three-year term (1955). The personnel of this committee is as follows:

B. F. Byrd, Sr., Chairman, Nashville (1954)
H. B. Gotten, Memphis (1953)
Kyle C. Copenhaver, Knoxville (1955)

Medical Education

Pursuant to action of the House of Delegates, the Committee on Medical Education was dissolved, since its functions have been largely taken over by the Public Service Committee.

Memoirs

No changes in personnel in this Committee were made. The Committee is as follows:

Henry L. Douglass, Chairman, Nashville (1953)
J. C. Pearce, Jackson (1954)

Postgraduate Instruction

Dr. Frank Whitacre, Memphis, was added

to the Committee in order to provide guidance in the planning and establishment of the next course of lectures in obstetrics which the Committee will institute in September, 1953. The personnel of the Committee is as follows:

W. C. Colbert, Chairman, Memphis
James M. Bethea, Memphis
Edward T. Brading, Johnson City
Robert M. Finks, Nashville
A. M. Patterson, Chattanooga
Harold Boyd, Memphis
Carrol Turner, Memphis
Bart N. White, Murfreesboro
John B. Youmans, Nashville
Frank Whitacre, Memphis

Cancer

Dr. Louis Rosenfeld, Nashville, was appointed to the Committee for a three-year term (1955), succeeding Dr. R. N. Buchanan, Jr., Nashville. Dr. R. H. Monger was reappointed for a three-year term (1955). The personnel of this Committee is as follows:

C. H. Heacock, Chairman, Memphis (1953)
Louis Rosenfeld, Nashville (1955)
C. S. McMurray, Nashville (1954)
Stanton S. Marchbanks, Chattanooga (1953)
Ralph H. Monger, Knoxville (1955)
R. L. Sanders, Memphis (1954)

General Practice

Dr. C. B. Roberts, Chairman, was reappointed to a three-year term (1955). The personnel of this Committee is as follows:

C. B. Roberts, Chairman, Sparta (1955)
J. Paul Baird, Dyersburg (1953)
Estill L. Caudill, Jr., Elizabethton (1954)

Emergency Medical Service

Dr. James C. Gardner, Nashville, Chairman, tendered his resignation as Chairman and nominated Dr. James Wilson of Memphis as Chairman, Dr. Gardner to remain as a member of the Committee. Its personnel is as follows:

James E. Wilson, Chairman, Memphis
James C. Gardner, Nashville
Joe L. Raulston, Jr., Knoxville
W. J. Sheridan, Chattanooga
J. R. Thompson, Jr., Jackson
W. C. Dixon, *ex officio*, Nashville

Industrial Health

Dr. George Duncan of Nashville was appointed to a three-year term succeeding Dr. J. H. Sayers of Nashville. The personnel of this Committee is as follows:

Jean S. Felton, Chairman, Oak Ridge (1954)
Bedford T. Otey, Memphis (1953)
George Duncan, Nashville (1955)

Prepaid Insurance

The Executive Secretary advised the Board that Maclin Davis of Nashville, Chairman, resigned and that Dr. N. S. Shofner had agreed to serve as Acting Chairman for the purpose of presenting a report of the Committee to the House of Delegates. Dr. Shofner was then duly appointed Chairman of the full Committee and Chairman of its Executive Sub-Committee, and Mr. A. J. Baird, Nashville, was nominated by Dr. Daugh W. Smith as the fourth lay member of the Committee, replacing Mr. Maclin Davis. The appointment of Mr. Baird is contingent upon his acceptance. Dr. Smith is to confer with Mr. Baird with reference to this appointment. The personnel of this Committee is as follows:

N. S. Shofner, M.D., Chairman, Nashville
John T. O'Connor, Knoxville
Clyde York, Columbia
R. H. Peoples, Memphis
A. J. Baird, Nashville
R. B. Wood, M.D., Knoxville
J. P. Sloan, M.D., Jamestown
Joseph W. Johnson, Jr., M.D., Chattanooga
W. C. Chaney, M.D., Memphis

Executive Sub-Committee

N. S. Shofner, M.D., Chairman, Nashville
D. W. Smith, M.D., Nashville
Charles L. Cornelius, Sr., Nashville
R. H. Kampmeier, M.D., Nashville

Public Service

Dr. Charles C. Smeltzer of Knoxville was reappointed for a three-year term (1955). Dr. J. Paul Baird of Dyersburg was reappointed for a three-year term (1955). The Board authorized the Nashville members to name a replacement for Dr. W. K. Owen of Pulaski, whose term had expired, upon consultation with Dr. L. W. Edwards, Chairman of the Committee, and Mr. Ed Bridges, Public Service Director. Dr. C. B. Roberts was reappointed for a three-year term as a member from the state at large, and Dr. J. Marsh Frere, Chattanooga, was reappointed for a three-year term as a member from the state at large. Dr. Charles C. Trabue, IV, Nashville, was reappointed for a three-year term (1955) on the Executive Sub-Committee. The personnel of the Committee is as follows:

L. W. Edwards, Chairman, Nashville (1954)
H. L. Monroe, Erwin (1953)
C. C. Smeltzer, Knoxville (1955)
W. A. Garrott, Cleveland (1954)
Thurman Shipley, Cookeville (1953)
W. N. Cook, Columbia (1954)
J. R. Thompson, Jr., Jackson (1953)
J. Paul Baird, Dyersburg (1955)
Harold Boyd, Memphis (1954)

Members, State-at-Large

J. O. Manier, Nashville (1953)
C. B. Roberts, Sparta (1955)
W. C. Chaney, Memphis (1954)
R. B. Wood, Knoxville, (1953)
J. Marsh Frere, Chattanooga (1955)

Executive Sub-Committee

L. W. Edwards, Nashville (1954)
J. O. Manier, Nashville (1953)
Charles C. Trabue, IV, Nashville (1955)

Liaison (United Mine Workers of America)

Dr. B. M. Overholt, Chairman, Knoxville, was reappointed for a three-year term (1955). Personnel is as follows:

B. M. Overholt, Chairman, Knoxville (1955)
Cecil E. Newell, Chattanooga (1953)
J. S. Hall, Clinton (1954)

Advisory to Woman's Auxiliary

The Committee *in toto* was reappointed for a one-year term. The Committee is as follows:

Clyde Croswell, Chairman, Memphis
Robert M. Finks, Nashville
W. W. Potter, Knoxville
Moore J. Smith, Jr., Chattanooga

Veterans Affairs

Dr. Ernest G. Kelly, Memphis, tendered his resignation as a member of the Committee and no one was appointed to succeed him. The remainder of the personnel was reappointed for a one-year term. The Committee is as follows:

H. H. Shoulders, Chairman, Nashville
L. W. Edwards, Nashville
Kyle C. Copenhaver, Knoxville
W. C. Chaney, Memphis

Rural Health

The Executive Secretary advised the Board that Dr. Thayer Wilson of Carthage had resigned, whereupon Dr. Thurman Shipley of Cookeville was appointed in his place. Dr. T. G. Cranwell of Pikeville was appointed to fill the unexpired term of Dr. Frank H. Booher, Lynchburg (1953). Dr. Booher, being the only physician in his county, had expressed his regret at not being able to attend the Committee meetings. Other members reappointed were Dr. James A. Loveless, Gallatin, Dr. Henry T. Kirby-Smith, Sewanee, and Dr. John L. Armstrong, Somerville. The personnel of this Committee is as follows:

William N. Cook, Chairman, Columbia (1954)
Rae B. Gibson, Greeneville (1954)
James S. Hall, Clinton (1953)
Henry T. Kirby-Smith, Sewanee (1955)
Thurman Shipley, Cookeville (1954)
T. G. Cranwell, Pikeville (1953)
James A. Loveless, Gallatin (1955)
Hunter Steadman, Henderson (1953)
John L. Armstrong, Somerville (1955)
J. T. Carter, Germantown (1954)

Grievance

The personnel of the Grievance Committee is automatically determined, since the By-Laws provide that the Committee shall be composed of the three immediate Past-Presidents of the Association. Dr. H. W. Qualls was, therefore, succeeded by Dr. Ernest G. Kelly, Memphis, three-year term (1955), and Dr. N. S. Shofner of Nashville, automatically became Chairman of the Committee. The Committee is as follows:

N. S. Shofner, Chairman, Nashville (1953)
Ralph H. Monger, Knoxville (1954)
Ernest G. Kelly, Memphis (1955)

Blood Banks

A special committee of the Board on Blood Banks was appointed, composed of the following persons:

M. L. Trumbull, Chairman, Memphis
David K. Gotwald, Nashville
Jack Adams, Chattanooga

No terms of office were designated, and since it is a special committee, it is presumed that the appointments were for a one-year term.

Journal Advertising

Upon recommendation of Dr. R. H. Kampmeier, Secretary-Editor, the Board authorized and instructed the Executive Secretary to notify Mr. Robert Byrd, Executive Secretary of the Memphis and Shelby County Medical Society, and Mr. Jack Ballentine, Executive Secretary of the Nashville Academy of Medicine, that they are authorized to sell local advertising for the Journal of the Tennessee State Medical Association, and that they will be paid a commission of fifteen per cent on all sales.

Essay Contest

Upon motion duly made and seconded, it was decided to continue the essay contest among the high schools of the state, and that the state prize of a $500.00 government bond be provided again next year.

T.S.M.A. Representative to Joint Conference on Postgraduate Training

Dr. Kelly presented a letter from Dr. O. W. Hyman, Dean of the University of Tennessee School of Medicine requesting that the Tennessee State Medical Association appoint a representative to a joint conference of representatives of the medical profession and representatives of the medical school to determine what courses shall be offered and at what times by the University of Tennessee in its recently organized postgraduate department. Dr. Kelly, Memphis member of the Board, was authorized to make this appointment and to notify Dr. Hyman.

Vocational Rehabilitation

Dr. Milton Adams of Memphis had advised Dr. Kelly by letter that more and more work in the vocational rehabilitation work in Tennessee involves plastic and reconstructive surgery. Dr. Adams requested that the field of plastic surgery be represented on any special committee which the Association might appoint for liaison with the vocational rehabilitation program. After full discussion, it was decided that it would be inappropriate for the Board of Trustees to name a committeeman to the Vocational Rehabilitation Board, since these appointments are duly made by other organizations.

There being no other business, the meeting was adjourned at 2:00 p.m.

Abstracts of Reports of Officers and Committees Read Before House of Delegates of the Tennessee State Medical Association, April 7, 1952

REPORT OF THE PRESIDENT

Ernest G. Kelly, M.D.

The report of the President was published in full on page 158 of the April issue of the Journal.

REPORT OF THE PRESIDENT-ELECT

Daugh W. Smith, M.D.

The inaugural address of the President-Elect was published in full on pages 127-131 of the April issue of the Journal.

REPORT OF THE SECRETARY-EDITOR

R. H. Kampmeier

I. The undersigned has continued, as editor of the Journal of the Tennessee State Medical Association, in his attempts to attain and keep a balance of (1) scientific and clinical material, (2) socio-economic developments, and (3) news of the component societies and of the members. By 1951, the first full year of your editor's activity, the Journal had increased its pages (other than advertising) by 17 per cent from 450 pages in 1949 to 536 pages in 1951. The non-scientific portions, consisting of editorial, socio-economic or newsworthy material, decreased from 54.7 per cent (246 pages) in 1949 to 35.5 per cent (190 pages) in 1951. The scientific or clinical material has been increased from 45.3 per cent (204 pages) in 1949 to 64.5 per cent (346 pages) in 1951. This change now aligns our JOURNAL with the better thinking in state journal content, namely, a 6:4 to 7:3 proportion of scientific to non-scientific copy.

The expansion of the size of the JOURNAL by 17 per cent was made possible by the able efforts of our Executive Secretary in increasing the pages of advertising from 475 in 1949 to 510 in 1951. (To remain solvent advertising pages must be about equal to the non-advertising pages.)

The excellent pages by the President, Executive Secretary and Public Service representative continue to keep the membership aware of our problems within the organization and our relationships to the public. The continued cooperation of the medical schools of the University of Tennessee and Vanderbilt University as well as the Departments of Pathology of several hospitals in the State provide education material for the JOURNAL.

II. As Chairman of the Committee on Scientific Work, the undersigned again wishes to express his appreciation to the members of the Committee, most of whom were very active in the planning of the Program for the 1952 meeting.

Again we have given the membership of the non-urban medical societies an opportunity to express their preference for much of the subject material presented, since the program should be the major postgraduate effort of the Tennessee State Medical Association. The Committee then chose essayists for these subjects on the basis of special qualifications and interests. The remainder of the program has been completed by selection from offered material and by the symposia.

It is my hope that the hours and energy spent on the JOURNAL and Scientific Program have produced results which meet the approval of the officers, delegates and membership of the Tennessee State Medical Association.

REPORT OF THE CHAIRMAN OF THE BOARD OF TRUSTEES

Daugh W. Smith

Your Board of Trustees holds two stated meetings yearly, with provision for emergency sessions if necessary. No emergency session was held last year, but several actions were taken by mail vote and the actions officially confirmed at the next regular session as a matter of record.

The Board met in regular Annual Session on April 11, 1951, in Nashville, immediately following the adjournment of the House of Delegates. Its actions at this meeting are summarized as follows:

1. Reviewed carefully the work-load of the headquarters office and instructed that the Public Service Director be relieved of as much routine office work as possible to permit more time in the field.
2. Authorized the Executive Secretary to proceed with a proposed study of our JOURNAL advertising rates looking toward an increase. (The rates were subsequently raised 15%.)
3. Authorized the Executive Secretary and the Editor to increase the size and number of pages of the JOURNAL.
4. Assigned four pages of the JOURNAL quarterly to the Woman's Auxiliary and the mailing of reprints to members of the Auxiliary.
5. Appointed a special Postgraduate Evaluation Committee composed of Dr. Ernest Kelly, Dr. Carrol Turner and Dr. W. C. Colbert to investigate the possibility of correlating or combining the Committees on Medical Education and Postgraduate Instruction.
6. Approved Dr. Kampmeier's request as Chairman of the Program Committee to not permit specialty groups to place guest speakers on the general program without clearance with the Scientific Program Committee.
7. Appointed all of the 22 Special and Standing Committees of the Association.

Semi-Annual Meeting, Knoxville, December 2, 1952

Board members were the guests of the Ralph H. Mongers for the semi-annual session in Knoxville, with all members present. Among the more significant actions taken at this session were the following:

1. Advised Dr. R. B. Wood, Chairman of the Tennessee AMA Delegation to use their best judgment on matters pending before the AMA House meeting in Los Angeles on December 6.
2. Delayed action on AMA representation from Tennessee, pending official report of the AMA Secretary on Tennessee membership. (We have since been notified that the AMA lists 2,022 Tennessee members as of December 1, and that we are entitled to three delegates for the year 1952.)
3. Approved the detailed report of the Executive Secretary which included a quarterly financial statement, a prediction of fund conditions at the close of the year, membership, office personnel and management, and business management of the JOURNAL.
4. Authorized an increase in the subscription price of the JOURNAL from $2.00 to $5.00 per year.
5. Instructed the Executive Secretary to continue to look for more adequate office space.
6. Authorized Dr. Ralph Monger, at his request, to conduct a voluntary subscription campaign to raise funds for the purchase of a headquarters building.
7. Adopted a detailed operating budget for the year 1952. (Copy attached.)
8. Adopted a resolution approving in principle the fluoridation of public water supplies.
9. Authorized the Scientific Program Committee to pay the expenses of TWO guest speakers to the Annual Meeting, one of which is to be the President's guest.

10. Authorized and instructed the Secretary-Editor to draft an amendment to Article IV of the Constitution providing for a provisional membership in the Association for medical students, with prior Board approval.
11. Authorized the Chairman in consultation with Dr. L. S. Edwards and Dr. James Overall to appoint an additional member to the Public Service Committee representing the Pediatricians (state-at-large).
12. Elected Dr. B. M. Overholt to fill the unexpired term of the late Dr. Herbert Acuff as Chairman of the Liaison Committee to the United Mine Workers of America.
13. Authorized the Chairman to appoint an Archives Committee for the Association.
14. Expressed official appreciation to the Ralph Mongers for one of the most delightful meetings of the Board.

The Board of Trustees has served the Association with pleasure. Members have attended every meeting 100 per cent and their careful and conscientious attention to the meticulous details of the financial and general management of the business of this Association deserves our profound gratitude. The Board, in turn, is appreciative of the careful consideration by the House of all matters involving finance, since the Board is, of course, charged in most instances with financing the projects which the House authorizes. The finances of your Association are in excellent shape. The Board receives quarterly financial statements from the Executive Secretary and the accounts are audited annually by certified public accountants. A copy of the 1951 annual audit is attached to this report.

EXHIBIT "A"

Statement of Cash Receipts and Disbursements
Year Ended December 31, 1951

Income—			
Receipts—Schedule A-2			
Dues		$ 49,851.25	
American Medical Association Assessments		46,860.00	
Interest on Investments		137.50	
Refund American Medical Association Assessments		283.75	
Advertising		15,823.40	
Exhibit Space		5,400.00	
Commissions — American Medical Association		191.00	
Subscriptions and Extra Copies of JOURNAL		49.00	
Sale of Booklets and Pamphlets		251.65	
Refund Expenses Paid		130.54	
Contributions—Tennessee Surgical Plan		6,027.31	
Contributions—Building Fund		1,045.00	
Total Income Receipts			$126,050.40
Disbursements			
MEDICAL JOURNAL—Schedule A-3		$ 13,349.04	
Salaries and Wages—Schedule A-4		23,850.04	
General Expense—Schedule A-5		12,736.59	
Board of Trustees—Committee and Convention Expense — Schedule A-6		6,993.05	
Postgraduate Instruction		6,500.00	
Assessments Remitted to American Medical Association		47,062.50	
Social Security—Schedule A-7		277.09	
Tennessee Surgical Plan—Schedule A-9		741.18	
Tax Payments Deducted from 1950 Salaries:			
Social Security	$ 29.13		
Withholding Tax	291.80	320.93	
		$111,830.42	
Less—Deductions, December, 1951:			
Withholding Tax	$325.00		
Social Security	20.62	345.62	
Total Disbursements			111,484.80
Excess Receipts over Disbursements			$ 14,565.60
Capital—			
Receipts:			
Principal—First Mortgage Loan	$16,421.08		
Interest—First Mortgage Loan	2,118.09		
Proceeds from Sale of Bonds	18,582.80		
		$ 37,121.97	
Disbursements:			
Purchase of Mortgage Notes		48,936.92	
Excess of Capital Disbursements over Capital Receipts			*22,814.95*
			$ 2,750.65

BUDGET*

January 1-December 31, 1952

Estimated Balance on Hand—	
January 1, 1952	$ 7,000.00
Estimated Receipts:	
Dues	48,000.00
Journal Advertising	16,000.00
Exhibit Rentals	5,000.00
Miscellaneous	500.00
Total	$ 76,500.00
Appropriations:	
Journal Expense	$ 13,500.00
Salaries	23,400.00
Travel Expense—Ex. Sec. and P. S. Director	2,400.00
General Office Expense:	
Rent	2,400.00
Postage	1,200.00
Printing, Stationery, Utilities, and Supplies	5,000.00
News Releases, Clipping Service	500.00
Audit	200.00
Committees' and Officers' Expense:	
Editor's Honorarium and Clerk Hire	3,600.00
Committees	1,000.00
Board of Trustees	500.00
Other Officers, AMA Delegates	1,000.00
House of Delegates—Annual Meeting	2,500.00
Miscellaneous Expense:	
Attorney Fees	2,000.00
Essay Contest Prize	375.00
Replacement and New Equipment	1,000.00
Postgraduate Instruction	10,000.00
Contingency Fund	5,925.00
Total	$ 76,500.00

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*Adopted December 2, 1951.

REPORT OF THE CHAIRMAN OF THE COUNCIL

Kyle C. Copenhaver, M.D.

The report totaled statistical data by districts. Grand totals are as follows:

Number of members of Districts	2,044
Physicians residing in Districts	2,297
Physicians eligible, not members	145
Number of new members for year	143
Number of members died during year	32
Number of members dropped from roll	49
Number of meetings of Districts	394
Average attendance at meetings	690
Number of scientific papers read	356

No members had been before the Council for unethical conduct during the previous year. Poor attendance and poor scientific programs were cited among some of the smaller medical societies. The enlarged Public Service Program of the Nashville Academy of Medicine was commended, and the Council recommended that smaller societies having difficulty with attendance and scientific papers should combine for social and scientific purposes. The recent organization of a Four-County Medical Society in Henry, Benton, Weakley, and Carroll Counties was cited as an excellent move.

REPORT OF THE EXECUTIVE SECRETARY

V. O. Foster

The Executive Secretary outlined six major fields of responsibility of his office, which are as follows:

1. Finance and Budgetary Control.
2. Custodian of records, proceedings and property.
3. Director of personnel and office management.
4. Business Manager and Managing Editor of Publications.
5. Director of the Tennessee Plan.
6. Organizational services.

With the employment of Ed Bridges as Field Secretary and Public Service Director last June a year ago, the Executive Secretary was relieved of headquarters office functions in the fields of Publicity, public service and public relations. Mr. Bridges has also broadened the services of headquarters to local societies and individual members. I want to take this opportunity to commend Ed for a top-notch job. His dedication to your welfare is a matter of record—his tireless efforts have resulted in a much greater appreciation of this Association and its objectives by the public. We are among the leaders in good public service—public relations activities among states our size. Much of this success must be credited to Ed—one of the finest PR men in organized medicine.

I would like to discuss briefly the responsibilities of my office in order to give you a bird's-eye view of the administrative side of the Association's activities.

Finance and Budgetary Control

Your Executive Secretary is responsible for the collection and disbursing of all funds. The financial transactions of your Association are strictly controlled by budgetary procedure. Each year, the Board of Trustees at the semi-annual session approves the budget for the next fiscal (calendar) year. The Executive Secretary prepares the annual budget based upon previous years' experience and upon the financial needs and resources available. Once the budget is adopted, it sets the strict pattern for all financial transactions. The Trustees receive quarterly financial reports, an annual report and a copy of the annual audit by CPA's.

Records, Proceedings and Property

The records of this House, the Board of Trustees, the Council, the Standing and Special Committees and all official papers and records including a detailed membership file are kept in the headquarters office. As you know, our office also collects and forwards AMA dues. Your Executive Secretary is under a $10,000 fidelity bond. Membership last year was 2,097, composed of 1,956 active, dues-paying members, 133 veteran members, and 8 armed services members. Several 1950 state dues were also collected during 1951. Of the 1,956 active dues-paying 1951 members, 1,787 also paid AMA dues, or 92 per cent. Incidentally, this voluntary support of AMA is very high on the list of state associations, percentage-wise.

Director of Personnel and Office Management

The number of persons employed in the headquarters office remains the same as last year, five —the Executive Secretary, the Public Service Director and three assistants. Responsibility for the routine work-load is clearly broken down between the Executive Secretary and the Public Service Director. My services are organizational in the main while Mr. Bridges is concerned with public service activities. Each of us has a private secretary, and a bookkeeper and membership clerk. Office morale is good; however, personnel and space is inadequate for a much greater expansion of headquarters activities.

Business Management of Publications

The Executive Secretary exercises general supervision of the make-up and publishing of the Journal and other publications of the Association. He is responsible for the sale of advertising and the business management of other publications. Advertising revenue for the Journal climbed to $15,823.40 last year, an increase of $1,346.36 over the previous year. Advertising rates were increased during the past year by 15 per cent, which largely accounts for the increase in revenue. We are now publishing and mailing 2,850 copies of the Journal each month at a cost of $13,300.00 annually.

The Tennessee Plan

The general direction and administration of the Tennessee Plan is another responsibility that continues to require more and more office time. When it is realzied that we have 1,722 participating physicians, 33 approved underwriters, and more than 375,000 persons enrolled in the Plan, it is apparent that the handling of complaints, making recommendations, and otherwise exercising general supervision of the Plan will continue to become an increasingly greater part of the day-to-day work load. So far, despite the Plan's rapid growth, its administration has not placed an unreasonable burden on the office.

Organizational Services

The Headquarters Office and the staff are at the continuous disposal of the officers, the Board of Trustees, the Committees, and individuals charged with official responsibilities. We are in position to assist with record-keeping, leg-work, clerical assistance, and organizational services to the more than 125 officers and committeemen of this Association. Increased interest and activities of official nature mean more work for your headquarters staff—and that's exactly what we are for. We invite you to make use of us in every possible way. May I take this occasion to pay a real tribute to the forty-eight local society secretaries and presidents who make the headquarters office load easier and efficient. As *they* well know, we have to depend upon them as an official channel of information and for the collection and forwarding of dues and official matters to us. They deserve the thanks of this Association for a sometimes vexing and unsung job.

Conclusion

Your headquarters office has been geared to do two important service jobs—one to the profession, my job, and one to the public—Mr. Bridges' job. Every activity is clearly in one of these general fields. Responsibility is equally clear. The staff is deeply grateful to the officials of this Association and its 2,097 members. We pledge you our best efforts in achieving and maintaining a high place among the state associations of this nation, to the end that better medical care shall be made continually available to our citizens and that we may continue to have the high public respect and esteem that such a great profession as yours deserves.

REPORT OF CHAIRMAN OF AMA DELEGATION

R. B. Wood, M.D.

The report cited the more significant acts of both the annual and interim sessions of the House of Delegates of the American Medical Association in 1951. Highlights were as follows:

June Session

1. Distinguished service award won by Dr. A. O. Whipple of New York City.
2. Outlined the creation and activities of the Department of Public Relations.
3. Adopted the following resolutions:
   a. Creating a Reference Committee on Public Relations.
   b. Against Federal Postgraduate Medical Education gifts.
   c. Support resolutions of the Sons of Revolution asking Congress to investigate teaching of socialistic propaganda in school.
   d. To approve the principle of the single membership of the A.M.A. and to instruct the Board of Trustees to report at the next meeting.
   e. That past Presidents be members of the House of Delegates for a period of five years.

f. To amend the by-laws to include a Reference Committee on Military medicine.
g. Against the formation of a section on Public Relations and to retain Whitacre and Baxter in advisory capacity only.

December Session

1. Recited excerpts from the address of the President, Dr. John Cline of California.
2. Heard Dr. Dwight Murray, Chairman of the Board of Trustees, announce a contribution of one-half million dollars to the American Medical Education Foundation for the year 1952.
3. Complimented the Public Relations Conference conducted concurrently with the meeting of the House.
4. Stated that the Tennessee resolution on the medical and hospital care of veterans with non-service-connected disabilities was referred to a special committee for report at the June, 1952, session.

REPORT OF THE POSTGRADUATE EVALUATION COMMITTEE

Report Read by Carrol C. Turner, M.D.

A special committee of the Board of Trustees composed of Dr. Carrol C. Turner, Dr. Ernest G. Kelly, and Dr. W. C. Colbert had been charged with the task of evaluating the present Postgraduate Program of the Association and to make recommendations with respect to the continuance of the Committee on Postgraduate Education.

The report stated that the scope and acceptance of the present Postgraduate Instruction Program had been carefully reviewed, and that the special investigating committee recommended the continuance of the present Postgraduate Course of Instruction and recommended further that the Committee on Medical Education be dissolved.

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK AND EDITORIAL BOARD

R. H. Kampmeier, M.D., Chairman

(The report of the Secretary-Editor, pages 186-187, contains this Committee report.)

REPORT OF THE COMMITTEE ON HOSPITALS

David W. Hailey, M.D., Chairman

(The Committee made no report.)

REPORT OF THE COMMITTEE ON LEGISLATION AND PUBLIC POLICY

C. M. Hamilton, M.D., Chairman

The Committee concerned itself with national legislation since the State Legislature was not in session during the previous year. Measures before the Congress which had the attention of the Committee were as follows:

1. A bill to permit professional men to set aside as much as fifteen per cent of their income for personal annuity or retirement plans to be deductible for federal income tax purposes.
2. A bill which would have let down the bars on indiscriminate refilling of prescriptions without checking with the physician.
3. Federal aid to medical education.

The report stated that no recent moves had been made to bring up the issue of compulsory health insurance legislation. The report stated that a real and significant approach to socialized medicine is being made through the back door via the medical care program as now operated by the Veterans Administration.

The Committee called for widespread support and interest in the Association's own plan for the medical and hospital care of the indigent in Tennessee which will be presented to the next session of the General Assembly, and concluded with an appeal to physicians to support wholeheartedly a "Get Out the Vote" campaign.

REPORT OF THE COMMITTEE ON LIAISON (HEALTH DEPARTMENT)

J. O. Manier, M.D., Chairman

The report stated that no matters have been referred to the Committee, but commended the fine relationships that exist between the medical profession and the State Department of Public Health.

REPORT OF THE COMMITTEE ON INSURANCE

B. F. Byrd, Sr., M.D., Chairman

The report was given orally by the Chairman. The report evaluated the two presently approved accident and sickness insurance programs underwritten by the Commercial Insurance Company and the National Casualty Company.

The Committee recommended that the Association grant exclusive approval to the Commercial Insurance Company and the Hartnett-Geny Company, General Agents, to write accident and sickness benefits for the members of this Association. This recommendation of the Committee was subsequently approved.

(The Chairman will file a written report with the Executive Secretary at a later date.)

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

W. C. Chaney, M.D., Chairman

The report stated that much of the formal work of this Committee is now being carried on by the Public Service Department and recommended the dissolution of the Committee, which was subsequently done.

REPORT OF THE COMMITTEE ON MEMOIRS

Henry Douglass, M.D., Acting Chairman

The report listed the deceased members of the Association for 1951, totaling 42 physicians. The report paid tribute to the contributions of these men of medicine and called for a closing of the ranks of members. The report concluded with the famous poem by Rudyard Kipling, "Adieu."

REPORT OF THE COMMITTEE ON POSTGRADUATE INSTRUCTION

W. C. Colbert, M.D., Chairman

The report reviewed the previous course in "Psychiatry as Applied to the Practice of Medicine," which was completed in 1951 and stated that 975 physicians had attended the lectures.

The report stated that the present course in internal medicine opened in September, 1951, and that the total attendance to date (April 7) is 232. The instructor, Dr. John F. Dee, was commended and it was estimated that enrollment in the present course may reach 1,500 physicians.

The report concluded with the statement that 8,909 registrations have been received by the various courses conducted by the Committee since its inception in 1937, and that 3,400 lectures have been given by the various instructors and with a recommendation that "the present extension program in postgraduate training be continued in the state." This action was subsequently taken.

REPORT OF THE COMMITTEE ON CANCER

C. H. Heacock, M.D., Chairman

The brief report stated that no formal meeting of the Committee had been held this year, but that the members, as *ex-officio* members of the Board of Directors of the Tennessee Division of the American Cancer Society, had attended the regular meetings of the Board and had made significant contributions to the Tennessee Division's work.

REPORT OF THE COMMITTEE ON GENERAL PRACTICE

C. B. Roberts, M.D., Chairman

The report recounted the rapid growth and interest in the Tennessee Academy of General Practice, stating that three local academies are already in existence. They are the Andrew Jackson Academy, for Middle Tennessee, the Memphis Chapter for West Tennessee, and the Chattanooga Area Chapter organized in March, 1952.

The report recounted the splendid postgraduate course now available to general practitioners through the cooperation of the Vanderbilt University School of Medicine, which offers to all GP's approximately 25 hours of formal training within a year.

The report stated that the Memphis Chapter had been instrumental in establishing a clinic for the teaching of general practice as an integral part of the University of Tennessee Medical School.

The Chairman then reported that the Committee on Education had cooperated with and assisted in every way the essay contest sponsored by the Woman's Auxiliary. The report stated that during the recent contest 3,500 high school students in Tennessee entered and that the contacts by these students in search of resource materials resulted in reaching some 50,000 Tennesseans for consideration of the title, which was, "My Privileges in, and Responsibilities to, a Free Country."

The report cited excerpts from various essays, all of which indicated the interest and solid thinking of Tennessee's high-school students in the field of citizenship.

REPORT OF THE COMMITTEE ON EMERGENCY MEDICAL SERVICE

James C. Gardner, M.D., Chairman

Members of the Emergency Medical Service Committee have been very active in their various sections of the state in civil defense planning. A recent United Press story states that Tennessee is leading the Southern states in civil defense. More than two million dollars has been appropriated for civil defense activities in Tennessee by the State Legislature and federal government, and the purchase of supplies and equipment is underway.

In larger cities detailed planning for first aid stations and emergency hospital units complete with professional personnel have been organized or will be in the near future.

Many local medical societies have devoted special programs to civil defense planning, and even the smaller towns are being organized.

Tennessee ranks ninth in the nation with respect to funds appropriated by the state for civil defense purposes.

REPORT OF COMMITTEE ON INDUSTRIAL HEALTH

Jean S. Felton, M.D., Chairman

The Committee on Industrial Health of the Tennessee State Medical Association has had no formal activity during the past year. The chairman attended a joint meeting of the Council on Industrial Health of the American Medical Association and the Chairman of State Medical Association Committees on Industrial Health held in Pittsburgh on January 17. The subjects of county medical society indoctrination in industrial health practices and procedures and workmen's compensation practices and procedures were discussed, and the current plans of certain community efforts in northeastern industrial and urban centers were discussed.

REPORT OF THE COMMITTEE ON PREPAID INSURANCE

N. S. Shofner, M.D., Acting Chairman

The Tennessee Plan is now three years old. 1,722 Tennessee physicians are participating in the program and 33 approved underwriters, both commercial and non-profit, are selling the Plan. Today more than 375,000 Tennesseans are insured under the Tennessee Plan.

The reasons for abandoning the idea of two plans "A" and "B" were explained as follows:

1. A majority of the underwriters felt that difficulty would be experienced in determining which Plan to sell a given group.

2. That changes in earnings would make it difficult to determine elegibility for full service of a given policyholder; and

3. One underwriter, which sells the Tennessee Plan to a large number of farm people, stated that the two plans would be administratively impossible.

The Committee then began the task of revising the fee schedule of the present Plan. This revision is now complete. Sale of the revised fee schedule with $200.00 maximum benefit and with slightly increased amounts for certain surgical procedures is impossible by virtue of a recent regulation of the Wage Stabilization Board. A petition has been filed with the Board for approval of the revised Plan.

The Committee recommended that the House approve raising the income limits for family groups to $4,200 per year when and if the revised schedule can be put into effect. The over-all increase in the revised schedule was reported as 11 to 13 per cent, but that the net increase in premium rates would be slightly over two per cent. This is due to the fact that the allowances for the more frequent surgical procedures were not substantially increased.

A supplemental report compiled during the session reported progress in the petition for approval of the revised Plan now before the Wage Stabilization Board.

REPORT OF THE PUBLIC SERVICE COMMITTEE

L. W. Edwards, M.D., Chairman

A vastly expanded Public Relations-Public Service Program was outlined in the report. The Director was reported as having attended 78 public meetings in addition to many medical and committee meetings, addressed 57 groups, traveled 17,000 miles, shown 460 hours of health movies, and distributed approximately 7,000 pieces of literature.

Concrete public service projects have been sponsored through local medical societies, whose membership totals 85 per cent of the membership of this Association.

The report named three major projects which the Committee would undertake during the next year:

1. Pushing legislation to establish a program for the medical and hospital care of Tennessee indigents.

2. An all-out campaign to get out the vote.

3. An active program to recruit student nurses in collaboration with the Tennessee State Nurses' Association.

REPORT OF THE COMMITTEE ON LIAISON, U.M.W.A.

B. M. Overholt, M.D., Chairman

Steady improvement and rapport between referring physicians and the United Mine Workers Health and Welfare Fund was reported. No complaints have been filed with the Committee with respect to the administration of the Health and Welfare Fund. The Committee invites discussions from any physician in the event complaints or problems arise in the administration of the Health and Welfare Program of the United Mine Workers of America. The Committee intends to meet quarterly rather than yearly during the next year in order to keep up with current problems in its field.

REPORT OF THE ADVISORY COMMITTEE TO WOMAN'S AUXILIARY

Clyde V. Croswell, M.D., Chairman

The Committee cooperated and assisted in every way the Woman's Auxiliary during the previous year. It endorsed the Auxiliary's plan to set up health councils and assisted in the conduct of the essay contest sponsored by the Auxiliary.

REPORT OF THE COMMITTEE ON VETERANS AFFAIRS

H. H. Shoulders, M.D., Chairman

The report recounted efforts of the Committee during the past few years to secure the adoption of a resolution by the AMA known as "The Tennessee Resolution," pertaining to the hospital and medical care of veterans with non-service-connected disabilities.

The report outlined a plan of "grass roots" consideration of the Tennessee Resolution and reported great interest and success in recent conferences with physicians, hospital administrators, and representatives of other public groups in a study of the V.A. Hospital Program and the provisions of the Tennessee Resolution.

The report pointed out the conflict between the expansion of the Hill-Burton Program and the expansion of the present V.A. Hospital Construction Program. The further expansion of V.A. hospital construction was condemned and the further expansion of local hospital facilities under the Hill-Burton Program was encouraged.

REPORT OF THE COMMITTEE ON RURAL HEALTH

W. N. Cook, M.D., Chairman

The objectives of the Committee were listed as follows:

1. Cooperation with all the other agencies in Tennessee which are interested in rural health.

2. The promotion of the organization of a state and of local health councils.

3. Supplementation of the work of your Public Service Committee as it pertains to rural Tennessee.

4. To promote the appointment of Rural Health Committees in each County Medical Society.

5. To promote the education of more physicians by the expansion of medical school enrollment.

6. To encourage extension of health services into rural communities by location of adequate (though

not necessarily elaborated diagnostic, clinical, laboratory and hospital facilities in rural communities where there is established need.

7. (a) To promote a well-organized plan of postgraduate education for physicians located in rural areas.

(b) To promote the training of professional aids and office technicians. Solid accomplishment under objective one was reported. The promotion of health councils, the second objective, of proceeding slowly. Plans for preparing articles on rural health for a leading farm magazine is planned.

Objective number five is being reached through the increased enrollment of medical students in the University of Tennessee Medical School.

Objectives six and seven constitute the major interests of the Committee as projected for next year.

REPORT OF THE GRIEVANCE COMMITTEE

H. W. Qualls, M.D., Chairman

The grievances filed by the public with various Grievance Committees and local societies were satisfactorily adjudicated at the local level. One complaint was referred to the Grievance Committee from the Bedford County Medical Society but the complainant neglected to appear before the State Committee at a stated meeting. The report stated that one written complaint would be acted upon by the Committee during the annual session.

Direct and Retrograde Aortography. Deterling, R. A., Jr. Surgery 31:88, 1952.

The importance of an adequate method of aortography has become more apparent during the last decade because of the growing interest in the field of vascular surgery. In developing a technique for obtaining satisfactory aortograms, several radiopaque compounds have been used. Thorotrast (thorium diotide), sodium iodide, Diodrast (iodopyracet), and Neo-Iopax (iodoxyl) have all been used with sodium iodide proving to be the most radiopaque.

Sodium iodide has caused the most marked cardiovascular alterations after intravenous injection with Diodrast and Neo-Iopax causing less disturbance with comparable doses. With extravasation into the periaortic tissues the Neo-Iopax elicits little or no discomfort while this is not true of the other compounds.

The technique of direct abdominal aortography as initiated by the Portuguese urologist, dos Santos, in 1929, has been modified by several investigators in recent years. In 67 aortographic studies on 55 patients from the Surgical Service of Presbyterian Hospital the following technique has proven satisfactory.

Under Pentothal Sodium anesthesia intravenously the patient is placed in the prone position on an X-ray table equipped with a Potter-Bucky grid. Local anesthesia may be preferable in elderly patients. A malleable 16 cm., 18 gauge Wagner needle is introduced about 2 cm. below the twelfth rib and 7 cm. to the left of the spinous processes and is directed anteromedially grazing the vertebral body and entering the aorta. When general anesthesia is employed the use of either 20 cc. of 75% Neo-Iopax or 10 to 20 cc. of 80% sodium iodide has proven satisfactory. If the iliac or femoral vessels are under investigation, a delay of one to three seconds is advisable before exposure of the film. The retrograde method of injection through the femoral artery has practical disadvantages and has not been found necessary

Failures in opacifying the thoracic aorta in angiocardiography has led to a technique of retrograde thoracic aortography by injection through the ulnar artery or the left common carotid, the latter having proven more satisfactory.

Of 55 patients studied on the Surgical Service and over 40 on the Urological Service, there were no fatalities. Transient encephalopathy was noted in 2 patients and chemical neuritis in 3, all of whom received 80% sodium iodide. It is apparent that as new vascular surgical techniques appear these special procedures for arterial visualization will have to keep abreast. (Abstracted for the Middle Tennessee Heart Association by James A. Kirtley, M.D., Nashville.)

STAFF CONFERENCE

Vanderbilt University Hospital*

Case I

DR. AMBROSE LANGA: This young lady who is 17 was riding in a car on April 6, 1952, 16 days ago, at 3:00 in the morning. The car hit a bridge and she was found in a creek about thirty minutes later. She was taken to her local physician who sutured a laceration of the left leg and sent the patient to the Vanderbilt University Hospital where she was admitted at about 6:00 a.m. On her admission the patient was in a deep coma, bleeding heavily from the right ear, nose and mouth. There was a complete closure of the left eye due to swelling and hemorrhage. There was a marked deformity of her lower jaw. Her respirations were very labored, her breath sounds were distant and there was crepitation on both sides of the sternum. X-rays of the skull and of the chest were reported to be normal and there was a fracture over the right side of the jaw with marked displacement of the fragment. Because of her labored respiration, fractured jaw and danger of aspiration of gastric contents, a tracheotomy was performed about thirty minutes after admission. A large amount of dark bluish material was obtained by aspiration through the tracheotomy tube. The patient was given oxygen through the tracheotomy tube, was given tetanus and gas gangrene antitoxin, was put on penicillin and streptomycin therapy and given i.v. fluids. Her condition remained about the same for the next three days. On April 8th, a small polyethylene tube was inserted in her stomach and this tube was replaced by a small sized Levine tube for tube feeding. She was started on feedings of 3,000 cc. liquid diet daily. Diarrhea was controlled by decreasing the amount of sugar in the tube feedings and by milk of bismuth. For a period of about ten days the patient was in a decerebrate state with tonic extension of the spine, neck, arms and legs. At the present time her condition is fair, the patient is still on tube feedings and penicillin. Her reactions to painful stimuli are prompt but she is still in coma.

DR. CULLY COBB: Show us the reaction when you stimulate her painfully.

DR. LANGA: She opens her eyes and moves all her extremities but doesn't try to grip your hand.

DR. COBB: She makes a chewing movement too, doesn't she?

DR. LANGA: Yes, sir. I forgot to say that about five days ago we put in an arch bar to reduce the fracture of the lower jaw so there is just a slight deformity at the present time.

DR. COBB: She scowled when you moved her then. How long has it been since there were any extensor responses to painful stimuli? She was in a tonic extended posture at first, wasn't she?

DR. LANGA: Yes, sir, but she started having responses to painful stimuli the first night, or first day when she was brought in.

DR. COBB: How long did she have those decerebrate responses?

DR. LANGA: Until about two days ago.

DR. COBB: She doesn't seem to get them now, does she?

DR. WILLIAM MEACHAM: Yesterday, she was certainly relaxed, and more so than at any other time.

DR. COBB: She still doesn't respond to speech at all?

DR. MEACHAM: No, I haven't been able to get her to speak at all. She opened her eyes when I mentioned her name this morning for the first time.

DR. COBB: What about reflexes and painful stimuli over the extremities? When you pinch her legs and arms, does she move them? Yes, she makes a face. She doesn't seem to move the left arm quite as readily as the right, does she? Is that because it's hurt?

DR. MEACHAM: I might say that the degree of extensor rigidity was always greater on the left.

DR. COBB: Is there a Babinski? Have you tested that lately?

DR. LANGA: There was no Babinski present several days ago.

DR. COBB (examining patient): I believe that is a Babinski response—on the left. The right is a little more withdrawal I'd say. We probably lump several clinical syndromes into what we call decerebrate rigidity but there is great uniformity of the motor pattern. These patients extend the back, they extend particularly the arms and legs, toes pointed downward and the arms extended and turned in. We see people in that state, for example, who have had an extradural hematoma and after the profound coma has just reached the point before that where breathing becomes irregular. We generally assume that that is the result of compression of the midbrain. But I think occasionally we see people with cortical lesions who have something similar to this. Dr. Meacham, you mentioned a patient of yours with bilateral temporal lobe lesions. Was the syndrome pretty much the same?

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*Neurosurgical Staff Conference, from the Department of Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

DR. MEACHAM: This patient presented a perfect picture of what we call a decerebrate post-traumatic state. There was exterior rigidity. The slightest stimulus would make it much worse and with stertorous, labored respirations. When his brain was examined at terminus, the hypothalmus and midbrain were normal but there was bilateral temporal lobe softening, and some more generalized and apparently more superficial cortical damage and contusion, so that I think this picture can probably occur from what we call cortical contusion.

DR. COBB: Dr. Ward, does the decerebrate rigidity come from interruption of suppressor activity from the cortex.

DR. JAMES WARD: Possibly. A lot of people are beginning to question the existence of actual suppressor strips. The type of reflex response you get in decerebrate rigidity is the same type that you obtain with lesions of the cortical level in that there are spasticity and increased reflexes. There is not the extensor quality in cortical lesions as a rule that you see in lower lesions of the nervous system.

DR. COBB: Is the idea of a facilitory and suppressing motor area in the reticular formation weakening or gaining strength?

DR. WARD: When we stimulate the medial reticular formation of cats there is cessation of spontaneous walking movements. We haven't seen any of that sort in the outer surface of the cortex. The whole story is not known yet by any means. There is evidence that there are pathways in 4 S, the suppressor strip just in front of the motor cortex, to the medial reticular formation which McGoon showed originally was responsible for the innervation of reflex activity in lower levels, but clinical correlation is unsettled.

DR. MEACHAM: I think this girl brings out some things in the clinical management that are worth emphasizing. First of all, she would not be alive today had it not been for the alert house officer who recognized the situation that we are all very prone to gloss over, and I would like to emphasize here the real importance of doing a timely tracheotomy on these people. This girl had a broken jaw, her nasopharynx and tracheobronchial tree was filled with blood, mucus and tracheobronchial secretions. She was in this decerebrate state with marked extensor spasms and rigidity, her tongue falling back in the nasopharynx. Now it is extremely difficult in this condition to maintain an open airway. While de don't do tracheotomies on all patients with head injuries, when an open airway cannot be maintained by the ordinary means of aspiration through the nose and through the mouth, a tracheotomy should be done. This girl's condition improved immediately following tracheotomy—she literally was drowning, and this was done before any of us was called to see her and I commend the alertness of the house officer who will do that. A tracheotomy is a simple procedure to carry out and may be lifesaving, and then anybody can suction properly through the tracheotomy tube. I'm sure that this girl's existence up to the present time has been based on really one thing—the timely tracheotomy. Of course we have done some other things. We've seen to it that she had proper care of her bladder, proper skin care and that she has not been allowed to develop contractures. We've tended her broken jaw, she has received proper attention insofar as fluid, electrolyte and nutritional requirements are concerned.

She has survived this dreadful stage of decerebrate rigidity where the mortality rate is extremely high. Some of these people will not recover in spite of all that can be done for them but I feel, knowing some of them can recover, that it is worth while to leave nothing undone. This girl has never developed signs of intracranial hypertension that would lead one to expect an epidural hematoma or a subdural hematoma, or say a sizable subcortical hematoma or intracerebral hematoma. There is no indication for surgery. Now if she had shown a deteriorating picture, instead of one of progressive improvement, I would have used exploratory burr holes to look for a subdural hematoma which may or may not have been there. I feel, in view of the progressive picture of improvement, however slow, that maybe she is going to make it. When she does begin to improve, if she does, I'm sure it will still be unpredictable as to how far she will improve. Some of these people will go on to complete improvement, others will not. Others will improve to a certain point and remain at that point. To my mind, it is impossible to prophesy with any degree of accuracy early in these cases what the outcome is going to be. It is a case of watching, waiting and seeing.

DR. COBB: The pathogenesis of these injuries is interesting. Civilian head injuries are almost entirely acceleration or deceleration injuries and our society seems to be exposing people to these acceleration injuries of the brain more and more. The damage apparently comes from the peak force of the acceleration. The brain can be accelerated just so fast and no faster without suffering damage to the brain tissue and to the blood vessels of the brain to cause both large and small hemorrhages. This problem of falling out of automobiles would seem unnecessary and yet we see a regular stream of children who fall out of cars. Most of them are not hurt very badly. Usually the skin gets pretty badly scratched up and occasionally one of the long bones will be fractured or there may be a minor skull fracture but often they are not unconscious and usually they don't have very bad contusions of the brain such as this girl has. Of course, the reason for this is that the fall is only a foot or two and then the speed of the car is dissipated gradually. The person skids along the road until he comes to a stop and the brain is never accelerated very quickly. That isn't so of course when a car strikes a culvert or telegraph pole, or goes into a ditch or creek bed as this girl did. When that occurs, then the head is instantly decelerated and injury to the brain occurs. I feel that automobiles are much less safe than they ought to be. The doors of all our cars are poorly designed for safety. They are fastened by very narrow prominences so that any springing of the body of the car will allow the door to come open even if it is latched. This greatly increases the danger in any automobile wreck. However, most of the children who fall from moving cars open the doors by accidental pressure against the handles. Safely latched are needed to obviate this danger.

DR. WARD: An electroencephalogram might be of interest on a patient such as this. There is a report of correlation found in the degree of recovery and the abnormality in the EEG, though apparently no correlation in the amount of hemorrhage at the time as far as I could tell. If a person has a bad looking EEG following such an accident, the recovery period is much longer and oftentimes very poor. By contrast, those people with marked symptoms at first and a relatively normal EEG recovered much better.

DR. COBB: Better ways of guessing how these people will do are needed, although as Dr. Meacham said, we have to treat all these patients as if there were a possibility of recovery.

Case II

DR. LANGA: The next case is a 31-year-old white female patient who was admitted because of pain in the neck, left shoulder, left arm and weakness of the left arm of three months' duration. She was unable to supinate the left hand but she had had this trouble ever since childhood. On physical examination there was found slight atrophy of her left deltoid muscles; the scapula was raised and rotated outward but all shoulder movements were done well. All her cranial nerves were intact, reflexes of the upper extremities were slightly sluggish, those of the lower extremities were hyperactive. No clonus or Babinski were present. Sensation was intact. A lumbar puncture was performed which showed a block and spinal fluid protein of 1,430 mg. per cent. A lumbar myelogram was performed and a block in the dorsal spinal canal was found. The next day pantopaque was injected into the cisterna magna and a block in the region of C3 was found. She was operated upon on April 15, 1952, through a cervical laminectomy and an extensive lesion of the spinal cord between C3 and D2 was found. The cord in this region was enlarged but this enlargement was very symmetrical. A No. 18 needle was inserted into the spinal cord and no fluid was obtained. A biopsy of the lesion of the spinal cord was performed at the operation. Her post-operative course has been very satisfactory.

DR. COBB: There was really very little

to indicate organic disease in her initial examination. I think the one really definite finding was that the tendon reflexes in the upper extremities were absent and those in the lower extremities were quite brisk. On one occasion I could get up to about three jerks of clonus but nothing more than that and there was no Babinski sign on either side. Different observers got different notions about sensory changes in the upper extremities but these sensory changes were so mild or questionable that a definite pattern could never be discovered. Since her operation she has gotten along well and I thought we might just demonstrate the reflexes to see how they are at the present time. (Percusses left biceps tendon.) I think I can feel a faint tightening of the biceps tendon.

DR. R. TAYLOR KING: Has there been a good deal of weakness?

DR. COBB: No; hardly any. She has never been able to supinate the left hand well and she noticed that the left forearm is smaller than the right. (To patient:) I think if you hold the two arms out, the doctors can probably tell about that. I think you can see that this forearm is a little less muscular than the right one. How do you feel now about the sensation in your hands and fingers? Do you notice any change?

PATIENT: No; they feel all right.

DR. COBB: Let's see how the feet are—just let your foot fall on my hand. The reflex is still more active now, I think, than it was before. There you see the clonus,—15 jerks in the right foot. That's the most I've seen. We might see about the Babinski response. Certainly no Babinski.

DR. MEACHAM: How about the Oppenheim?

DR. COBB: It is absent. (Patient leaves.) Dr. Francis, would you comment on the myelogram findings?

DR. HERBERT FRANCIS: Routine films of the cervical spine did not show any change. On the myelograms here we see the opaque medium injected below and running up to the second dorsal vertebra. It reaches the level of the second body and stops. From the injection above, we have in the lateral projection the opaque medium coming to the third cervical and in the A.P. view we see, through the open mouth, a level of the opaque medium due to obstruction, with a little bit trailing down some of the root sheathes.

DR. COBB: What about differential diagnosis on the bsais of X-rays?

DR. FRANCIS: I can't make one, Dr. Cobb, but I think from the size of this distortion, if it is one continuous tumor that an ependymoma would be a most likely cause for such an extensive lesion.

DR. COBB: What about syringomyelia?

DR. FRANCIS: It seems to me that with so much extensive block we could expect to see some change in the bony parts of the canal, that is, the surrounding bony parts. We would expect to find some thinning of either the posterior arches or changes in the posterior parts of the body from the expansile change which came with a syrinx.

DR. COBB: There's a good clinical argument, I think, against syringomyelia. Though while one could have as long a fusiform enlargement as this in a syringomyelia, it is not probable without finding much more concrete changes in the shoulder girdle and upper extremities than she has,—in the way of atrophy and sensory change. I wanted to show her just briefly for two purposes,—first because we have such nice myelograms and secondly to demonstrate how large an intramedullary lesion can be without causing very impressive interference with function. This is an ependymoma, Dr. Francis.

DR. COBB: We reached the tumor at about a depth of 2 mm. The laminectomy included the second, third, fourth, fifth and sixth cervical vertebrae. The greatest enlargement is at about the fifth. It is a fusiform enlargement, tapering in both directions, and of course we didn't get all the way to the caudal end of the enlargement but there was a fairly free flow of fluid below that level so that what we did was to decompress the area of primary enlargement and put in a strip of polyethylene as a dural substitute in order to leave the dura widely opened. We divided several of the denticulate ligaments to allow the cord to rise and got the biopsy of the lesion. Because of the fact that she has almost no clinical signs I felt that it wouldn't be wise to try to remove the tumor, which surely would leave her with some increase in her clinical signs. Instead we would treat her with X-ray.

DR. FRANCIS: This is a continuous solid tumor, as far as you could tell?

DR. COBB: Yes, it is all one mass. The appearance of the myelogram is just like the appearance of the cord. The spinal cord is very wide and filled the dura as tight as the contents of a sausage. As soon as we incised the dura, the cord began to herniate. Dr. Clark, would you like to say something about the preservation of spinal cord function? Why didn't she have a paraplegia or quadriplegia?

DR. SAM CLARK: The obvious answer is that the pyramidal tracts were not interrupted. It's odd that they weren't. I remember a cord in the lumbar section of a syringomyelia of a patient who was a janitor here. His cord was so thin that in quantity the fiber tracts must have been down to a third of the quantity of white matter that normally existed about there. He had perfectly good function,—shuffled a bit. In today's case the fibers were just pushed into a corner I guess—or thinned out—this tumor must have grown slowly to allow them to adjust to the thing without being broken.

DR. MEACHAM: I believe that's the answer. It is the rate of growth. The rapidly growing tumors such as metastatic nodules will cause a complete transverse lesion even when they are still small. I don't know what the threshholds are for compressibility of the tracts but it must be a matter of pressure.

DR. COBB: With a neurofibroma or a meningioma, the cord may be reduced apparently to a ribbon and still function quite well if compression happens slowly enough. I think we had in conference here not very long ago a patient with syringomyelia who had a cord almost reduced to paper thickness, was full of fluid and yet functioned perfectly well. It must be pressure rather than distortion that causes the damage to the neurones, and if pressure is applied slowly enough, it must not do much harm. These tumors, ependymomas, are very, very slowly growing and of course that is the answer to this situation. Dr. Francis, do you want to say anything about the radiosensitivity of these tumors?

DR. FRANCIS: I think that is a very difficult thing to evaluate. I personally believe they show very little response to radiation. I think probably the main thing we can hope to do, if possible at all, is to make it even slower in progression than its normal course, which is very slow in most instances. There have been a few reports in which some people have felt that X-ray therapy was very worth while, with patients getting definite and relatively marked improvement from radiation therapy. From my own experience I have never had any in whom I felt the course was much more, if any more, improved than just the anticipated relative slow rate of growth of the lesion itself.

DR. COBB: We may deceive ourselves there because opening the spinal canal probably does allow another long period before symptoms arise, and of course we usually do that before beginning X-ray therapy.

DR. FRANCIS: Of course we've seen these patients operated on two and three times with repeated courses of therapy over a long period of years.

DR. MEACHAM: Would you irradiate her whole spinal column, or just locally, because this is one of two tumors that do metastacize in the subarachnoid space. We had one like that at the Veterans Hospital and he, by the way, seemed to be helped by X-ray therapy.

DR. FRANCIS: I don't believe it is really justifiable to treat the entire cord. The tumor is relatively unresponsive. I think you could do a great deal more damage than good by radiation of the entire cord unless there is some clinical evidence that there is metastasis. Then, if that is so and radiation is worth anything, the other local area can be treated as symptoms develop.

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

DR. AMOS CHRISTIE: After reading through this protocol I don't see how we could possibly help but be strongly influenced by what is recorded, particularly toward the middle and end of the protocol. The clinicians who saw the patient alive must have thought for good reasons that this was a case of congenital heart disease which could be remedied by surgical means. I should think it would be much more fun for all of us even if it turned out to be just that, to speculate on what else it might have been and look for the red herring and the possible jokers in this case. Dr. Britt and Dr. Shapiro would not have picked this case had there not been some other differential diagnostic problems for consideration. When one sees a cyanotic baby, in the newborn nursery, whose heart fails, what should be considered? That is our problem this afternoon.

This 8 pound 11 ounce white male newborn infant was delivered here. The multiparous 21-year-old mother had always enjoyed good health. An 18-month-old sibling was living and well. Mother's health during the patient's gestational period was reported as good. There were no known acute specific infectious diseases or viral infections during the 40-week gestation period. Maternal Kahn negative.

The reason for these negative statements must be obvious to you all, and I am sure should be included in the history of every baby with congenital defects these days. Association of maternal illness, specifically viral infections like rubella, periods of possible anoxia or other noxious agents with congenital defects are too well known to the whole group of students and staff to need re-emphasis at this time.

The baby was the product of a normal vertex, low forceps delivery under gas, oxygen and ether anesthesia following 4 hours of labor. During the immediate 2 hours pre-partum the mother received demerol 100 mg., I.V., delvinal 300 mg., and I.V. seconal 200 mg. Infant was described as cyanotic at birth.

What about the dosage of these drugs in relation to the problem which is about to present itself, that of a cyanotic baby who did not cry immediately? Where is Rogers? He is going to intern on obstetrics and is my consultant today. What about those doses? Are they unusually high?

MR. ROGERS: Not unusual in the labor room here.

DR. CHRISTIE: Well, is the combination more than average or are these rather large doses for common obstetrical practice?

MR. ROGERS: Not uncommon.

DR. CHRISTIE: I do not think these are unusually high doses. I suppose I might take liberties with what I believe Dr. Eastman would say about this situation. These doses in themselves and in combination would not be excessive,—perhaps a little on the high side. Let us say that if the amount of gas and ether were not excessive, perhaps the combination of these doses in themselves might not produce deleterious effects as far as the infant's breathing is concerned.

MR. ROGERS: For this period, 2 hours prior to delivery, as far as I am concerned this is pretty good sedation. I believe if it were given 6 hours before delivery it might be all right.

DR. CHRISTIE: That is an excellent point. But individually or collectively, I would not like to incriminate these drugs as reasons for this baby's cyanosis, although many of you know my feelings about the dangers. Be that as it may, I think there is a point here we might make in a minute.

Infant was described as cyanotic at birth. Respirations were regular 1 minute post-partum and a lusty cry was obtained 10 minutes post-partum. Air passages were aspirated but infant was still cyanotic on leaving delivery room. Temperature was 98.2°.

I believe the point I would like to make here is that the baby had a lusty cry 10 minutes post-partum, and you know a baby who had too much devinal or too much of the analgesic drugs, would have been sleepy. He might have been cyanotic but he probably would not have had a lusty cry, at least I would like to offer that as additional evidence that the cyanotic picture this baby had was not due to the maternal analgesics.

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*From the Departments of Pediatrics, Surgery, Radiology and Pathology, Vanderbilt University School of Medicine, Nashville, Tenn.

Four hours post-partum examination revealed a less cyanotic but somewhat lethargic newborn. Physical examination was otherwise considered to be within normal limits.

Twenty-four hours post-partum the patient was seen because of increasing cyanosis and dyspnea. Examination revealed marked cyanosis with rapid, shallow, grunting respirations. Lung fields were clear to auscultation. Heart sounds were of poor quality but rhythm was normal.

I put a check on my protocol at that point because I began to look for murmurs but no murmurs were described until later, on the fifth hospital day, when there is a note that a systolic murmur was heard for the first time. Is this correct, Dr. Britt?

DR. ROBERT BRITT: Yes.

DR. CHRISTIE:

The apex beat was palpated at the left anterior axillary line. Liver edge was palpated and percussed 5 cm. below the right costal margin in the right midclavicular line. Infant was placed in an incubator with continuous oxygen and digitalization was started.

We must interpret this as being heart failure with liver enlargement, heart percussible and enlarged; digitalization was produced by standard methods.

Now I wonder whether or not we should not stop a minute and discuss the reasons for cyanosis and some of the causes. Mrs. Corbitt, will you comment on cyanosis,—what kind of cyanosis do we have in this period,—what causes cyanosis beside the obvious things I mentioned before? We are oriented toward congenital heart disease, but maybe there are some jokers in this case.

MRS. CORBITT: Something in the respiratory system,—congenital anomalies anywhere in the bronchial tree or trachea might cause cyanosis.

DR. CHRISTIE: Yes, agenesis of the lung, shall we say. Cyanosis may have been from aspiration or perhaps the child had atelectasis. What else?

MRS. CORBITT: It could have a chemical factor in the picture.

DR. CHRISTIE: Methemoglobinemia, yes, we have had that in our nursery as many of you remember. It can occur very early in life. It is not impossible and should be discussed in the differential diagnosis. What else? How about the sudden onset of cyanosis and dyspnea in a newborn baby, at least in the neonatal period?

MRS. CORBITT: We think of pulmonary infection.

DR. CHRISTIE: Yes, sepsis and stapyhlococcal abscess, and then what happens when one has abscesses?

MRS. CORBITT: Pneumothorax.

DR. CHRISTIE: All right, pneumothorax. Then, of course, there is still another condition which some of you might remember. Anything else, Garrison?

MR. GARRISON: Aspiration pneumonia.

DR. CHRISTIE: Aspiration pneumonia, atelectasis. What else?

MR. GARRISON: Paroxysmal tachycardia.

DR. CHRISTIE: Yes, producing dyspnea, hyperpnea and cyanosis. What about the entity variously described as air block? Do you recall air block in some of our discussions? Along with the pulmonary interstitial emphysema air dissects along the vascular tracts to produce pneumomediastinum and with it occasionally high pressure pneumothorax and varying degrees of pneumoperitoneum. This is the picture of so-called air block in our pediatric literature. I think we might very well have such a case here. Possibly the 10 minutes before it cried were associated with resuscitation methods, although this is not necessarily true nor does it have to be associated with air block. Perhaps something like that went on, not mentioned in the protocol; there may have been acute respiratory distress from air block. I think it not a bad diagnosis. Would anyone else volunteer other causes of cyanosis in the very young? Cerebral damage, atelectasis, pneumothorax, air block and variants of that, and the obvious one which we are all thinking of and which we will dismiss in a minute when we talk about congenital heart disease.

Let's go on to the third hospital day. Some of these problems must have confronted the clinicians who saw the cyanotic baby in the first 24 hours, particularly in a baby who had heart failure, a big liver and no murmurs.

On the third hospital day fluoroscopy and X-ray of the chest was interpreted as showing some enlargement of the heart.

Dr. Francis is here now. Dr. Francis, this is a good time to show these pictures or tell us what you thought.

DR. HERBERT FRANCIS: The first examination showed a little cardiac enlargement and congestive changes in both lungs.

DR. CHRISTIE: Any lead to the anatomical diagnosis?

DR. FRANCIS: No. The second day I think a fluoroscopy was done and these films made. Congestive changes which we have noted on the original film seemed to be improved. The lungs were better aerated and the markings are not nearly as exaggerated.

DR. CHRISTIE: No sign of air block?

DR. FRANCIS: No. The heart shadow is a little bit large and we felt there was a little preponderance of the left side,—left ventricular enlargement on fluoroscopic examination.

DR. CHRISTIE: The protocol says "emphysematous." That might be significant later on as we learn the anatomical diagnosis.

The lungs appear to be somewhat emphysematous.

Can you confirm that now?

DR. FRANCIS: No.

DR. CHRISTIE:

At this time cyanosis was less intense but readily aggravated by the infant's crying. The liver was palpated 4.5 cm. below the costal margin. Several observers were unable to palpate the femoral or dorsalis pedis pulse.

This is surely a leading sign to us and would suggest to everybody including possible freshmen medical students in the room that this baby might have coarctation of the aorta or some variant of it. Mr. Corbitt, would you have any other suggestions or interpretations of this finding?

MR. CORBITT: I still think coarction most likely.

DR. CHRISTIE: What kind of coarctations do we have in this period of life?

MR. CORBITT: Infantile.

DR. CHRISTIE: Infantile, which is more proximal, isn't it, than the adult variety? There is a diffuse narrowing of the entire isthmus between the left subclavian artery and the ductus. The pulse differences are the same as in the adult variety. Let's go on and at least keep that in mind, because something of that kind must have been in the clinician's thinking, particularly in view of what happened later.

Nutritional requirements were met by administration of standard formula through a polyethylene gastric tube. On the fifth hospital day increasing cyanosis and dyspnea were noted, with associated grunting respirations and moderate sternal reactions.

So whatever the infant had, whether cerebral trauma or atelectasis, it did not have pneumothorax or air block. They had been ruled out adequately for us. Atelectasis is unlikely. We know we have enlargement of the heart.

A systolic murmur was heard over the precordium for the first time. Liver edge was palpated on a level with the right iliac crest. Temperature curve since the second hospital day had been one of intermittent daily spikes from a normal baseline to 100-101. Weight curve was satisfactory and elimination normal. Hgb. was 17 Gm.

What about that, Mrs. Corbitt, is that normal or does that represent polycythemia?

MRS. CORBITT: Seventeen Gm. is normal,—really on the lower side.

DR. CHRISTIE: I think so too.

An EKG was interpreted as revealing right ventricular enlargement and large P waves suggesting auricular enlargement.

No help to me as far as an anatomical diagnosis is concerned. Dr. Francis, did you say the left ventricle was enlarged or could you tell?

DR. FRANCIS: From the fluoroscopic examination it was thought that the left ventricle was enlarged (on the second day) slightly enlarged.

On the sixth hospital day angiocardiography was done with the infant tolerating the procedure well.

DR. CHRISTIE: Before we had the film and before the murmur was heard, we had a baby in heart failure with a large heart. I wonder if we should not speculate a little as to the possibility of an anatomical diag·

nosis because it may be revealed in a minute now by Dr. Francis and the angiocardiograms, or it may not be. Nevertheless, we have a cyanotic baby with a large heart and until the fifth day no heart murmur. Would anybody like to venture an anatomical diagnosis of congenital heart disease which would fit in with this picture? Dawson, how about you helping me out?

MR. DAWSON: I think of cyanotic heart disease in the first week or two of life as a tetralogy of Fallot, although it does not exactly fit in with this picture.

DR. CHRISTIE: No, it does not. The baby had a large heart which is surely not boot-shaped, hasn't murmurs that could be heard until quite late, lung fields do not appear to be be like a baby with tetralogy of Fallot, so we have to consider again this coarctation of the infantile variety of the aorta, don't we, or some variant of it? What else, anybody?

Perhaps this is the time to get Dr. Scott to speak and tell us what he thought, because he was involved in this case also. I think that we have in this hospital about 6, 8 or 10 babies every year who come in in heart failure and who have no murmurs. Some of them, not all, are cyanotic like this baby. We have in our literature and in our texts a diagnosis of idiopathic hypertrophy of the heart, which is obviously a very poor diagnosis. The more we learn about the pathology, and the more we can correlate pathology with the X-ray examination and clinical examination, there is a gradual picking off of pieces from this diagnosis, and we are learning that the diagnosis as such is probably extremely rare if it even exists.

There are a few things that can produce enlargement of the heart in a cyanotic baby. A couple of years ago we had such a baby who, I believe, turned out to have a rhabdomyoma. Glycogen storage diseases were set off from the entity of idiopathic hypertrophy of the heart a number of years ago. Dr. Mitchell Rubin in reviewing cases of so-called idiopathic hypertrophy found that a large group had glycogen storage disease. More recently when this diagnosis is made we have come to think of what is called endocardial sclerosis or endocardial fibroelastosis, or what was known in the old literature as fetal endocarditis. It has been called to our attention frequently enough to suggest this condition when one sees so-called idiopathic hypertrophy of the heart. I do not think we can diagnose this case as such, because as soon as the murmur appeared it was no longer idiopathic hypertrophy of the heart. We have to have another explanation and that gets us back to making an anatomical diagnosis. Dr. Scott, you saw the baby at this time. What was your thinking about this baby who hadn't any pulses, or at least poor pulses, who had heart failure and a big heart without murmurs at first with murmurs later?

DR. WILLIAM SCOTT: It was certainly a very confusing picture. The thing that was quite impressive to all of us who saw the baby were the absent pulses. I do not think I ever felt any peripheral pulse. I wondered, as did Dr. Stahlman, about aortic atresia, with the distal aorta fed by the ductus arteriosus and unoxygenated blood going into the systemic circulation.

DR. CHRISTIE: Say that again. The blood coming from the distal aorta went where?

DR. SCOTT: I thought he might have had an aortic atresia of either one of two types. One, in which there is a dissolution of continuity of the ascending aorta and the distal arch. In these rare cases the distal aorta is joined to the heart ductus, and some venous blood from the right heart is fed directly into the descending aorta through the ductus. With that sort of thing, which can be called a form of coarctation, we should have felt pulses in his carotids, which most of us did not. (Although some examiners thought they could feel faint carotid pulses, I never thought I could in those early days.) The other thing about that type of anomaly is that one should see a difference in the degree of cyanosis between the lower extremities and the upper, particularly when the baby cries. We could not demonstrate this. The second diagnosis we considered was aortic atresia of the basal type in which there is no aortic valve opening, but there is a large intraventricular septal defect, and again a ductus carrying blood from the pulmonary circuit into the descending aorta. We weren't able to go much further than that.

DR CHRISTIE: Isn't pulmonary atresia incompatible with this much life?

DR. SCOTT: No, pulmonary atresia is certainly compatible with much more life than this, but heart failure on the basis of pulmonary atresia at this age is quite uncommon, I think. Transposition of the great vessels is something that always has to be thought of in a newborn infant who is cyanotic, whether he has heart failure or not. It is very common, and it is quite common for a transposition anomaly to be associated with failure. Another possibility would be a tricuspid atresia with, of course, associated pulmonic stenosis. That sort of thing can lead to early failure,—in the first few days of life. However, we couldn't tie any of the latter possibilities in with the absent pulses. We had to assume that the baby had some sort of obstruction to the aortic flow. And, undoubtedly aortic atresia is what most of us thought he had.

DR. CHRISTIE: So you asked for angiocardiograms?

DR. SCOTT: Yes.

DR. CHRISTIE: Dr. Francis will now show you what he found.

DR. FRANCIS: In the preliminary film, before any injection was made, we can see the small rounded increased densities scattered throughout the lungs which made us think this child was back in congestive failure as he had been on the first day. This is how the lungs looked on the first day when he was digitalized. Injection was made and a series of films were made at one-second intervals for 8 seconds.

On first second films, opaque medium is beginning to fill the right auricle and we see more of the right auricle at 2 seconds. This little shadow is the filling of the right auricular appendage. The right auricle is seen again on the 3 second film and I think here we can see a straight linear margin which is probably the border of the right auricle.

At 4 seconds we see opaque medium in the right ventricle. Even at 2 seconds some opacity is beginning to show in the pulmonary artery. At 4 seconds it is quite clearly visualized. I would like to direct your attention to this apparent constriction about 1 cm. proximal to the top of the pulmonary artery before it divides into the right and left branches. On this film beginning opacification of the peripheral vessels in the lung is seen.

In the 5 second film we can see the left auricle in its usual position. We still have dye in the right auricle and right ventricle. Here again is seen the little constricted band on the pulmonary artery, before it branches into the two main branches, and it remains throughout the rest of the series as does visualization of the peripheral pulmonary vessels. The left auricle is constantly visualized throughout the rest of the series. On first glance I thought this patient probably had aortic stenosis because at no time had we been able to see aorta, either the thoracic or abdominal. We can see reflux into the inferior vena cava on the 3 second exposure and throughout the rest of the examination to some extent. After examination, we finally came to the conclusion that the dye seen in the extreme left heart might be a little in the left ventricle. At first we interpreted all this dye to the left of spine to be left ventricle, but after study we thought practically all of this was right heart, auricle and ventricle, with the pulmonary vessels seen throughout the remainder of the examination. Normally, within 3 seconds, we would have seen all of the dye pass out of the right auricular shadow and into the right ventricle and would have very good visualization, by 3 seconds at the latest, of the peripheral pulmonary vascular tree. However, we have to remember we thought this child was in congestive failure, thus accounting for the remarkably slow clearing of opaque media from the right side of the heart. Even at 8 seconds we still have opaque media in the right auricle and right ventricle and maybe a little bit in the left ventricle. Left auricle which is visible distinctly at the 5 second exposure is still present at 8 second exposure. Because of this very slow passage we had to change our mind about the aorta, which should have been seen where this gap is and should have been visible at this site after 5 seconds. At no time is there any visibility of the aorta at all. This was probably due to the slow passage of media through the heart and had we had later exposures the aorta might have been visualized. So we had to discount the lack of visibility of the aorta and presume that most of the change was on the basis of some pulmonary atresia although we could not, with this degree of constriction, see sufficient atresia to cause the slow passage of the opaque media. We did not really know what was wrong with this patient.

DR. CHRISTIE: It is pretty obvious that we did not either because the baby continued to go downhill. Now as is customary, I am forced to make a diagnosis and I can't do it any more than Dr. Francis or Dr. Scott. I would say this baby has Congenital Malformation of the heart, adding "incompletely diagnosed," and let it go at that and wait for Dr. Shapiro to tell us what the baby had.

DR. JOHN SHAPIRO: This was a very interesting case anatomically as well as clinically and I think that we can best present the lesion by a photograph.

At the time of autopsy there was generalized retroperitoneal edema, indicative, of course, of congestive failure and hepatic enlargement. The right side of the heart at the time of examination was quite prominent, and seemed to be hypertrophied as did the left side, although more so on the right side than on the left. Figure 1 shows that the left ventricle has an opaque membrane-like structure on the endocardial surface, the classical appearance of endocardial fibroelastosis. The right ventricle is conspicuously free of the structure which occupies the inner surface of the left ventricle. This membrane-like structure which, incidentally, is quite tough and fibrinous and extended into the left auricle, was confined to the left chambers with possible involvement of the pulmonary veins. The thickness is estimated to be between 2 and 3 mm. I think it is reasonable to assume that this hard fibrous structure might impose some actual mechanical barrier, both to the diastolic filling and the systolic emptying of this chamber, and I think might have been a factor in the prolonged circulation time of the blood through this chamber. The remainder of the heart on gross examination was not remarkable. There was a patent foramen ovale which was partially closed and was thought to allow passage of blood from the right to the left side but not from left to right. The ductus arteriosus was still patent and was quite large and the estimated diameter of this vessel at time of autopsy was about 1.5 cm., which is quite a good sized ductus. In so far as the nature of endocardial fibro-elastosis is concerned, I think we can show that quite well on microscopic section. This is a section of myocardium and in one area which represents the endocardial surface we can show a tremendous thickening of the endocardium. Here is the endothelialized layer of the ventricle; the thickened endocardium extends all the way up to here. Notice these vacuolated cells here which in my opinion represent the conduction fibers but there is a remote possibility that these may have contained glycogen. I think that they were vacuolated conduction fibers. The nature of the thick sclerotic layer is well shown here. I think we can show it better on the basis of connective tissue and elastic tissue stains. The term "endocardial fibro-elastosis" I think is quite descriptive inasmuch as there is both

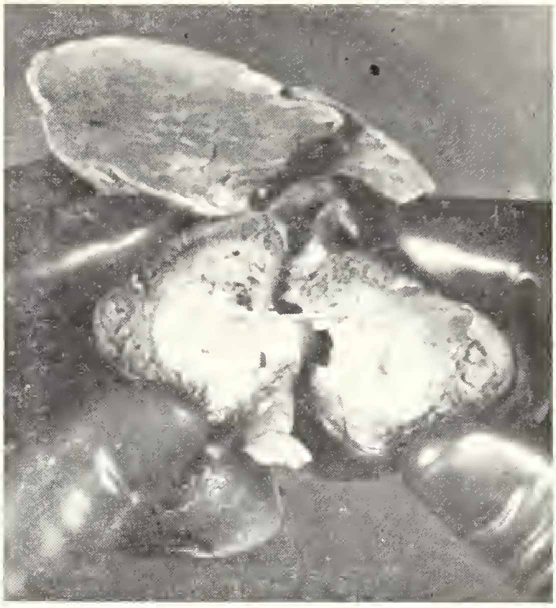

FIGURE 1

collagenous and elastic connective tissue making up this dense thick membrane. With a Mallory connective tissue stain you will note that a good part of the membrane is made up of collagen. This is an elastic tissue stain, the darker fibers you see represent elastic connective tissues. Thus, as in the other, there is a great abundance of elastic connective tissue. These findings give the lesion the name of fibro-elastosis. The etiology of this condition is completely unknown. We have had a total of 5 or 6 cases in this hospital. It has been previously known as subendocardial fibrosis or fetal endocarditis. I think the latter is an inappropriate term inasmuch as in these sections and in the other sections there is no evidence of inflammatory reaction. In the present state of our knowledge we had best classify it as a congenital anomaly. The lungs were atelectatic and vessels in the lungs showed some peculiar changes which I won't elaborate upon at the present time other than to say that they seemed to be thickened. We are interested in the nature of this thickening of the pulmonary vessels and we may investigate that further. Other than that, the autopsy findings were negligible.

DR. CHRISTIE: Dr. Shapiro, what were the changes again in the myocardium?

DR. SHAPIRO: The myocardium itself was comparatively normal for a week-old child except for hypertrophy. There was no glycogen deposition other than possible glycogen deposition which was pointed out. There was no inflammatory reaction in the muscle fibers nor in the interstitial tissue. The whole change as far as I could ascertain was confined to the subendocardial layers. Any other questions?

DR. BEVERLY TOWERY: Any on the right side?

DR. SHAPIRO: No, sir; it was all confined to the left side.

DR. CHRISTIE: I hope that when you see a baby with a big heart, who is cyanotic, in heart failure and is relatively pulseless rather than thinking of idiopathic hypertrophy of the heart you will consider this condition of endocardial sclerosis or fibro-elastosis. It is not a new condition as Dr. Shapiro indicated. You will find an excellent short description of it in Maude Abbott's article in Volume 4 of Osler's System of Medicine, under the title of "Fetal Endocarditis," but as Dr. Shapiro says, it really does not have any evidence of inflammation in it. There are some interesting sidelights from a purely pediatric standpoint. There are some recent articles in our literature on the subject which are pretty good summaries.[1, 2, 3] In about one-half of the cases there have been maternal infections, some of the viral infections. About 40-50 per cent have associated congenital abnormalities. Whether or not this means that there is defective germ plasm I do not know. As we frequently find multiple congenital malformations there may be embryological explanation for this. The details are a little vague at this time. When I talked to Dr. Clark about this, I believe he suggested that valves form from endocardium and sort of pouch out. Some variant of this development might have gone on.

I think I can recall four of these cases. Dr. Peterson told me the other day he remembered reporting one at the Vanderbilt Medical Society as a case report, a baby who had sudden onset of cyanosis, cough, anorexia, wheezing respirations, went into heart failure from what was thought to be asthma. This we might now recognize as a typical case of endocardial fibro-elastosis. Subsequent autopsy revealed this to be true. I believe none of our four cases have had any evidence of maternal infection, although the cases I referred to in the literature would indicate that that might be an etiological feature. As far as the physiology is concerned I suppose anything as sclerotic as the endocardium we have just seen can't push blood through it and that resolves Dr. Francis' observation in the angiocardiogram of slow circulation time within the heart. It is perhaps also the reason that secondarily it produces the heart failure. The myocardium becomes anoxic, can't properly circulate the blood and it hypertrophies and fails.

So we have at least a pathological explanation and physiological explanation for failure. I hope we will all come closer to the correct diagnosis on the next case of endocardial sclerosis, or fibro-elastosis which we see clinically.

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3. Hill, William T.: Endocardial Fibro-elastosis. Am. J. Dis. Child. 8:579, Nov. 1951.

The Return of Reproductive Capacity Following Spontaneous Abortion. Sullivan, C. L. Am. J. Obst. & Gynec., 63:671, 1952.

It is interesting to note just how much the simple uncomplicated spontaneous abortion debilitates the average woman, who never expects this common calamity to enter her personal sphere. Upon the quick recovery which generally ensues from this depression, there naturally arise, first, the question as to the cause of the misadventure and, second, the instinctive desire again to attempt reproduction. In the mind of the patient the cause is always physical and never anatomic, physiologic or dietetic. This study was undertaken to determine the time of and the efficiency of the reproductive capacity following spontaneous abortion. The established physiological concept of a thermogenic response to the ovarian production of progesterone was the method used in this study. The author reports observation of 65 patients and concludes the following. Routine curettage is not necessary in a clinically complete spontaneous abortion from the standpoint of return of ovarian activity. Ovulation will return in 90 per cent of cases prior to the first menses in four to six weeks, whether a curettage is performed or not. The first ovulation following spontaneous abortion is about one-half as fertile as in average cycles and exposures to pregnancy before the first flow after abortion probably should be avoided. (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tennessee.)

TENNESSEE PLAN THREATENED BY WSB RULING

Dr. Smith

Our doctor-sponsored Tennessee Plan of voluntary health insurance began operation in July, 1949, on a safe and conservative basis. We were following the adage that one must learn to walk before he can run. But now that many headaches have been encountered and eased, your Prepaid Insurance Committee has worked out detailed plans for an expansion of benefits. The Knoxville convention voted approval of a particular expansion of benefits to the public. This was the raising of income limitation for the head of the family from $3,600 to $4,200.

All this has been encouraging, but two months ago a federal bureau dealt a jolting blow to our expansion plans. The Wage Stabilization Board's Nashville office advised TSMA headquarters that General Wage Regulation 78 would prohibit the expansions we contemplate. The reason given was that such increase in benefits to employees would be considered as in lieu of wage raises—in cases where the employer paid part or all of the premium. The Board said such an increase in benefits would be "unstabilizing" to the nation's economy.

It is difficult to understand how—by any stretch of the imagination—an increase in insurance benefits can be construed as "unstabilizing." It seems that the reverse would be true. These increases simply go a step further in helping the people to protect their family budgets against the costs of unforseen illnesses. Such increases certainly would stabilize many family budgets. But the WSB says no, we can't take the step. It hands down an edict that we do not intend to take without a fight.

That fight was begun immediately after we were informed of the strange ruling. The first step was a letter and background material sent to Hon. Percy Priest, Congressman from the Sixth District of Tennessee and Democratic Majority Whip. He immediately contacted the WSB Chairman with an appeal. Other assistance came from doctors throughout the state who asked for and received aid, from Senator McKellar, and Congressmen Howard Baker, Carroll Reece, Tom Murray, and Clifford Davis.

The next step may be a hearing on our appeal for a reversal in the ruling, as it affects The Tennessee Plan. The TSMA Attorney, Mr. Charles Cornelius, is studying the entire situation, including correspondence from the WSB Chairman. Our principal hope to salvage the plans for expansions lies in obtaining a reversal of the ruling. The Executive Secretary of the Tennessee State Medical Association has filed the proper petition with the Wage Stabilization Board.

The Plan has grown rapidly since its birth and now covers some 380,000 Tennesseans. It deserves our strong support, particularly now that its future growth is being threatened by a ruling from Washington which seems to stifle free enterprise.

Daugh W. Smith

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MAY, 1952

EDITORIAL

THE ANNUAL SESSION OF 1952

The annual meeting of the Tennessee State Medical Association seemed to be a successful one, if one may judge by comments made by members to the officers. One gained a general sense of satisfaction in the atmosphere where doctors met in groups. The Committee on Scientific Work should feel that its efforts paid off, if the many complimentary remarks about the program are a true index of the members' feelings about this phase of the program. At this time the Committee thanks all the essayists who supplied the material which made our program so satisfying.

On the non-scientific side the profession of Tennessee in its House of Delegates put itself squarely in the position of throwing the lie into the teeth of the "do-gooders" who say that the medical profession offers nothing to correct the *alleged* inadequate medical care in this country. Because of the devaluation of the dollar plus lowered "take-home pay," the House of Delegates approved upping the income level for insurance under the Tennessee Plan to $4,200 for the married, maintaining the $2,400 level for the single person. The revised schedule ($200 maximum benefit) will replace the present schedule in all new contracts when approved by the Wage Stabilization Board and when enough physicians sign new participating agreements to service the revised contract. Thus prepaid surgical insurance still can potentially cover 70 per cent of the population. The second item of forward-looking public service was the passage of a resolution endorsing hospitalization for the indigent of Tennessee. The medical profession is willing and anxious to aid the "forgotten" of Ewing and his "social minded" cohorts.

The lighter side of the Annual Session was happily and efficiently provided by the Knoxville Academy of Medicine. Their hospitality is unmatched and the members of the Association owe the Knoxville physicians and their wives warm thanks.

* * *

NEW CHEMOTHERAPY IN TUBERCULOSIS

In the last issue* of the Journal of the Tennessee State Medical Association discussion appeared on the modern management of tuberculosis. Editorially, it was pointed out that unfortunate publicity had been given in the lay press to new drugs which might be of aid in the treatment of tuberculosis. (Incidentally, it seems likely that pharmaceutical houses should not be indicted for premature announcement of these chemical agents. In their instance their hands may have been forced by non-medical publicity.)

Since writing the April editorial, your editor has been circularized by a statement from the American Trudeau Society concerning the present status of isonicotinic acid hydrazide, the drug, or its variations and allied chemicals, under study. Because of its importance your editor believes further comments are justified on this subject so that members of the profession will be in a position to discuss it with their patients.

This group of synthetic substances are not

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*Staff Conference, Thayer Veterans Administration Hospital, Tennessee M. J., 45:143, 1952, Editorial *ibid.*, 45:159, 1952.

antibiotics. The isonicotinic acid hydrazide is bacteriostatic in vitro against the tubercle bacillus in concentrations as low at 0.02-0.06 mcgm. ml. It is ineffective against gram-negative and gram-positive pathogens. In monkeys, mice, rabbits and guinea pigs infected with virulent human strains of tubercle bacilli, it is promisingly effective in arresting the infection. During the first few months it thus seems to be the equivalent of streptomycin. No clear-cut information has been gained concerning the possible development of bacillary resistance to the drug.

It seems the drug and its derivatives are of low toxicity in the therapeutic ranges. Excretion is largely by the urine. It is present in the blood serum, cerebrospinal fluid and pleural fluid within an hour or so after administration. The drug may be given orally (in a range of 3-5 mg. Kg. of body weight) or parenterally. The toxic effects in man have been constipation, difficulty in beginning micturition, increased reflexes, hypotension and dizziness, eosinophilia, drop in hemoglobin and renal irritation in terms of albuminuria (trace) casts and reducing substances.

In man the drug has been used in the main in patients with advanced tuberculosis, or those with forms unlikely to respond to acceptable methods of therapy today. In such patients it has led to reduction of fever and increased appetite, weight and strength. The amount of sputum and number of bacilli in the sputum have been reduced; the X-ray film has shown some reversal of the pulmonary process. Early response in tuberculous fistulas and in a few cases of meningeal involvement has been favorable.

Certainly no undue optimism concerning the use of these drugs is warranted. We must assure the tuberculous patient and members of his family that the millennium in the treatment of tuberculosis is not here as yet. Much will need to be learned about these chemicals until their place in antituberculous therapy is established. Nothing is known concerning how these drugs act on the infecting organism, or on the host. Nothing is known about optimal dosage or mode of treatment, nor the duration of therapy, prolonged or brief. And as was said before, nothing is known concerning the development of bacillary resistance to the drugs.

At the moment there is no indication that these drugs can do more than streptomycin and paraminosalicylic acid, whose use was so well illustrated in the staff conference which appeared in the April issue. In any event these drugs belong only in the hands of physicians who treat tuberculosis in institutions which permit controlled observations. It is only after adequate study of large numbers of patients, having a disease as chronic as tuberculosis, that those in clinical research can advise the practitioner how to treat the single case in his hands at the moment.

R. H. K.

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Special Item

The members of the Tennessee medical profession should be aware of the support they have received from a most important group of citizens of this state. The Tennessee Congress of Parents and Teachers, representing a membership of 202,000 citizens, passed the following resolution at the annual meeting in April. This is the first time that any state Congress of Parents and Teachers has taken such a forthright position against federal medicine and support for voluntary prepaid insurance. Furthermore, it was indicated that the legislative committee of this body would support the medical profession in its efforts for the passage of legislation for provision of hospitalization for the indigent of the State.—Editor.

Resolution Adopted by Tennessee Congress of Parents and Teachers

WHEREAS, the Tennessee Congress of Parents and Teachers is deeply interested in the health of every child; and

WHEREAS, the proper medical care of children is essential to the welfare of this State; and

WHEREAS, children today are the beneficiaries of the finest system of medical care in the world—a system conceived and developed in an atmosphere of freedom, personal responsibility, private enterprise and private initiative; and

WHEREAS, local governments, local hospitals, and local physicians have always recognized their responsibility to care for those unable to pay; and

WHEREAS, voluntary, prepaid health insurance plans are now widely available by which self-supporting persons can pay the greater portion of their medical care costs without unreasonable financial hardship, and without endangering the personal doctor-patient relationship; and

WHEREAS, any system of compulsory health insurance under government control would deprive the individual of exercising his personal freedom and judgment in providing health care for himself and his family; and

WHEREAS, the Tennessee State Medical Assocaition has proposed a program for hospitalization of the indigent sick of Tennessee to be supported by tax funds with the medical services being rendered free by the physicians of Tennessee, and a committee has been appointed by Governor Browning to study the proposal and make recommendations to the next Legislature;

NOW, THEREFORE, BE IT RESOLVED BY THE TENNESSEE CONGRESS OF PARENTS AND TEACHERS—

That we believe the best medical care of children is available under the principle of free enterprise including the freedom of the patient to choose his physician; and

That voluntary health insurance is the best method of prepaying the costs of medical care without unreasonable financial hardship; and

That we endorse and give our support to the plan proposed by the Tennessee State Medical Association to provide hospitalization including medical care to the indigent sick in Tennessee; and

That we oppose any plan that would adversely affect medical progress or that would abridge the freedom of parents to assume their proper personal responsibility for the health care of their children.

DEATHS

Dr. Charles McCormick Oberschmidt, Memphis chest specialist and former Staff Chief at Oakville Sanatorium, died of a heart attack at 3:45 p.m., April 4. Aged 50.

Dr. Joe Hall, Maryville, who had practiced medicine in Blount, Loudon, and Monroe Counties for the past 40 years, died April 4, 1952, from a heart attack. Aged 64.

Dr. Owen Hassell Williams, Savannah, died March 22 after a long illness. Aged 70.

Dr. John Hartwell Marable IV, Cowan, died April 7, 1952, after a brief illness. Dr. Marable had practiced medicine for 45 years. Aged 77.

Dr. Thomas F. Booth, Pulaski, died on April 9 from a stroke while attending the Tennessee State Medical Association's annual convention in Knoxville. Dr. Booth served on the Association's Nominating Committee which held its final session just three hours before he was striken. Aged 50.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Medical Society

At the March 27 meeting Dr. John Killeffer read a paper on "Fractures of the Wrist," and Dr. Harold Henning discussed "Abuses of Bed Rest in Treatment of Myocardial Infarction." The papers were discussed by Dr. Houston Price and Dr. E. White Patton, respectively.

* * *

The Society supplanted its usual Spring Clinical Congress with a series of four dinner programs. The April 17 lecture was given by Dr. Isadore Dyer, Professor of Obstetrics at Tulane. His subject was "Present-Day Indications in Caesarean Section." The series of meetings were scheduled to be held at the Chattanooga Golf and Country Club.

* * *

Sullivan-Johnson County Society

The Society made a public announcement of its Grievance Committee last month. Dr. Charles J. Harkrader, Secretary, stated that anyone who had a complaint or grievance against any physician should write to the Public Relations Committee, Sullivan-Johnson County Medical Society, and the Committee would attempt to arrange an amicable settlement of such grievances.

Hamblen County Medical Society

The Society strongly endorsed a fluoridation program for Morristown's water supply. Dr. C. J. Duby, Morristown pediatrician, spoke in behalf of fluoridation before a meeting of the Rotary Club in Morristown last month.

Consolidated Medical Assembly

Dr. Seldon Mann, Chief of Medicine, Oschner's Clinic, New Orleans, addressed the dinner session of the Assembly at the New Southern Hotel on March 25. Dr. Mann's subject was "Some Practical Aspects in the Diagnosis and Treatment of Hypothyroidism."

Nashville Academy of Medicine and Davidson County Medical Society

On April 1, the members were guests of the staff of Central State Hospital with the usual excellent dinner. Dr. O. S. Hauk, superintendent, read a paper entitled "Diseases and Care of the Aged." At a Memorial Service on April 15, personal tributes were paid to those of its members who had died during the past year. The members of the Academy were guests of Vanderbilt University Hospital on April 29. The following program was presented:—"The Relief of Some Symptoms of Uremia by Potassium," by Dr. B. T. Towery; "Hysterectomy: Report of 1,331 Cases," by Dr. J. C. Burch; and "Demonstration of an Apparatus Designed for Extra-Corporeal Circulation," by Dr. R. A. Daniel, Jr., and Dr. R. A. Light.

* * *

The Academy, as a result of a strong recommendation to the Community Services Commission in Davidson County, has secured consideration of the employment of a trained medical examiner in Davidson County to supplant the antiquated coroner system. The Commission is making a thorough survey of all community services in the Nashville and Davidson County area.

Knoxville Academy of Medicine

At the April 1 meeting a paper was presented by Dr. J. C. Hill on the subject of "Paranoia." At the April 15 meeting there was held a symposium on "Operation Knoxville," a program of rehabilitation and employment of the handicapped. Those taking part in the discussion included two managers from industry, Messrs. K. R. Kaiser and E. J. Shetler, a representative of the Division of Tennessee Vocational Rehabilitation, Mr. W. Waters, sociologist, W. E. Cole, of U. T., and Dr. R. Patterson, Jr., who discussed the role of the medical profession in the program. At the April 29 Meeting Dr. James Prose presented a paper on "A Survey of Intra-Oral Cancer at the Knoxville General Hospital Cancer Clinic."

NATIONAL NEWS

A.M.A. Dues Clarification

In answer to several queries, the membership department has clarified a point in connection with the payment of dues by a member who is reinstated. A member, dropped for nonpayment of membership dues and who wishes to have his membership reinstated, would owe membership dues for the year in which he became delinquent and the year in which his membership was reinstated, but he does NOT have to pay membership dues for the intervening years. Here is an example: Dr. Blank was dropped in 1951 for nonpayment of 1950 membership dues. He applies for reinstatement of his A.M.A. membership in 1952. To bring about this reinstatement, he would be required to pay his 1950 membership dues and membership dues for 1952. Membership dues for 1951 would NOT be required.

American Medical Association

An amount of $80,000 to be paid over a

four-year period has been pledged by the AMA to the independent national agency, the Commission on Chronic Illness, for study in this field. The budget of $300,000 for the 4 years is provided by twelve organizations.

* * *

A final budget of $39,650 was approved for completion of the activities of the Committee for the Survey of Medical Education, which included study of a sample of 41 medical schools.

* * *

The AMA has accepted an invitation to cooperate with the President's Health Commission offering to the Commission all survey material it may have which might be of assistance.

* * *

U. S. Navy

Of those graduating from the nation's medical schools in June, 1952, 108 have accepted internships in naval hospitals with the rank of Lieutenant, j.g.

MEDICAL NEWS IN TENNESSEE

Fast-Growing GP Academy Elects New Officers

The fast-growing Tennessee Academy of General Practice conducted a solid and enthusiastic convention in Knoxville on April 7 in conjunction with the 117 Annual Session of the Tennessee State Medical Association.

Dr. C. B. Roberts of Sparta was installed as President, succeeding Dr. D. H. James of Memphis. Dr. James and Dr. D. J. Johns of Nashville reported on the recent convention of the American Academy of General Practice in Atlantic City.

New officers elected are: Dr. Louis A. Killeffer of Harriman, President-Elect; Vice-Presidents, Dr. E. L. Caudill, Jr., of Elizabethton, Dr. James P. Anderson, Nashville, and Dr. John C. Thornton, Jr., of Brownsville.

Dr. Johns was re-elected Secretary-Treasurer and commended for his efficient work.

Delegates to the next convention of the AAGP will be Dr. Fred Overton of Nashville and Dr. D. H. James of Memphis. Alternate delegates elected are Dr. A. F. Langston of Chattanooga and Dr. H. L. Armstrong of Somerville.

* * *

Tennessee Chapter of American College of Surgeons Organized

Almost one hundred surgeons attended the organizational luncheon of the Tennessee Chapter of the American College of Surgeons in Knoxville, on Monday, April 7, 1952, in conjunction with the annual meeting of this Association.

Dr. R. L. Sanders of Memphis, who had issued the invitations, explained the purposes of the Chapter. Following discussion, a vote was taken on whether a Tennessee Chapter should be organized. The motion to organize carried by a vote of 45 to 10.

The group then went into the election of officers. Dr. R. L. Sanders of Memphis was elected President; Dr. Edward T. Newell, Sr., of Chattanooga, Vice-President; and Dr. Dewey Peters, Knoxville, Secretary-Treasurer. The group then went into the election of councilors and elected the following: Dr. L. W. Edwards, Nashville; Dr. Hiram Laws, Chattanooga; and Dr. David Waterman, Knoxville. The President announced that Dr. Charles D. Blasingame of Memphis and Dr. John C. Burch of Nashville, the two Governors of the College in Tennessee, would also become members of the Tennessee Council.

The President read a copy of the standard constitution and by-laws for state chapters as recommended by the American College of Surgeons. They were adopted as read for the interim. By motion duly made and seconded, the dues to the Tennessee Chapter were set at $5.00 per year. Following discussion of the newly adopted Constitution and By-Laws, a motion was duly made and carried that the Council revise the By-Laws in such aspects as would make them pertinent to Tennessee, and to submit the proposed amendments to the members thirty days prior to the next meeting of the Chapter.

Dental Liaison Committee to Tennessee Plan Appointed

The Tennessee State Dental Association has appointed Drs. C. F. Landis, Ewing Connell, both of Chattanooga, and Dr. George Seeman of Nashville, as a liaison committee to work with Dr. Joe Johnson, Dr. Ed Newell, Jr., and Mr. Emerson Mitchell, all of Chattanooga, as a study group to advise the Prepaid Insurance Committee on including dentists in the Tennessee Plan where the listed procedures in the Plan are performed by dentists. There are about 18 such procedures. Under the present rules, dentists receive Tennessee Plan benefits ONLY in case of setting a fractured jaw.

*

University of Tennessee College of Medicine

The American Cancer Society granted $6,966 to Dr. James D. Hardy of the Department of Surgery for study of nutrition and the alarm response in cancer patients. Dr. Hardy also received a grant of $18,986 from the Army Medical Service, with the approval of the National Research Council, for the study of thermal burns and their effect on the function of heart, kidneys and fluid balance in the body.

*

The office of Naval Research of the U. S. Navy has awarded a research grant of $4,670 to Dr. Charles H. Eades, Jr., of the Department of Biochemistry to study the role of amino-acids in post-operative convalescence. He also received a $4,995 grant from the American Cancer Society to study the amino-acid content of blood or urine of cancer patients.

*

Dr. R. R. Overman and Dr. D. S. Carroll, of the Departments of Physiology and Radiology, respectively, will study the effects of radiation on salt and water balance and cellular permeability under a $15,163 grant by the Atomic Energy Commission.

*

Dr. A. M. Hand of Texarkana, Texas, has been appointed as Instructor in the Divisions of Pediatrics and Preventive Medicine to investigate the pediatric aspects of preventive medicine.

*

Charles Pfizer and Company has awarded a $1,000 scholarship for a student of deserving scholarship and in need of financial aid.

*

Dr. D. B. Zilversmit of the Department of Physiology has received a medal and letter from Queen Juliana of the Netherlands in recognition of services as an ambulance driver with the Dutch Army during World War II.

*

Murfreesboro Veterans Administration Hospital

Dr. William H. Sheldon, Professor of Medicine, Columbia Medical Center, New York, will lecture on Monday, June 23, 1952, on the subject of Constitutional Approach to the Psychiatric Reaction Patterns as follows:

1. Historical Background of Constitutional Research
2. The Somatotypes and Temperament
3. Reflection of the Somatotypes in the Psychiatric Patterns.

All members of the Medical profession are invited to attend.

*

The Medical Mirror

From time to time, this column will quote remarks from the public press about medicine, both favorable and unfavorable.

Excellent Steps in the Right Direction

> The Hamblen County Medical Society has taken a step which can have far-reaching consequences. It has set up a Grievance Committee and a Fee Schedule Committee.
>
> The Grievance Committee is to hear and act upon any grievance brought by any person against any member of the society. . . . The very fact that a citizen can air his views before such a medical board is in itself a revolutionary step. It can be conducive to greater and better service efforts by members of the [medical] profession.
>
> . . . The whole thing indicates some constructive thinking. There must be a closer tie between the medical profession and the people. The threat of socialized medicine is not gone by any means. It is being carried on by those individuals who fancy a grievance as well as those who lean toward the

socialistic free ride. The elimination of grievances will go a long way toward winning the battle . . . and certainly no thinking man wants socialized medicine visited upon him.

It is all too true that in some communities the biggest argument for socialized medicine rests in the doctors themselves. A grasping way, a complete disregard of civic obligations, and a contempt for patients has provided a fertile bed for the spread of socialistic tenets.

In Hamblen County, this situation is not true. And overtures like the one announced last week will go even further to cement good relations with a profession which deserves the highest respect.

—Editorial, *The Morristown Sun*
February 26, 1952

PERSONAL NEWS

Dr. R. H. Kampmeier, our Secretary-Editor, was guest speaker in medicine at the Annual Meeting of the Louisiana State Medical Association held in Shreveport last month.

Dr. W. W. Wilkerson, Jr., Nashville, was the guest speaker at the Woman's Auxiliary of the Nashville Academy of Medicine held at the Richland Club. His subject was "So That They May Hear Clearly and Speak Distinctly." He reviewed the history and work of the Tennessee Hearing and Speech Foundation.

Dr. Edward C. Mulliniks was appointed Director of the State's Industrial Hygiene Division of the Public Health Department, succeeding the late Dr. H. H. Hudson.

Dr. L. P. Pearce of Collierville received commendation through the *Collierville Herald* for his tireless efforts in providing emergency care for victims of the recent West Tennessee tornado.

Dr. Charles F. Webb, Jackson, of the Webb-Williamson Hospital which handled 26 patients of the March tornado were treated without cost. Dr. Webb said that these victims had already lost everything they had and were in no position to pay for medical care.

Dr. James A. Kirtley, Jr., Nashville, was elected a member of the American Surgical Association at its annual meeting recently. Other Nashville members are **Dr. John C. Burch** and **Dr. Rollin Daniel.**

Dr. Frank L. Roberts, Assistant Dean of the University of Tennessee's College of Medicine, is the new President-Elect of the Tennessee Public Health Association.

Dr. G. D. LeQuire, Tennessee's Outstanding General Practitioner, was honored by having the Easter program of the New Providence Presbyterian Church in Maryville dedicated to him as a result of his election as Tennessee's Outstanding GP.

Dr. W. B. Farris, Gallatin, Chairman of a special committee on voluntary health insurance of the Tennessee Congress of Parents and Teachers, did a masterful job in piloting a resolution favoring the Tennessee Plan and voluntary health insurance through the Board of Managers of the Congress in February, and finally through the annual meeting of the Congress held in Chattanooga last month. The resolution appears in a special article in this issue on page 210.

LOCATION WANTED

Location Wanted

A twenty-seven year old physician desires a location for general practice. He completed a rotating internship at John Gaston Hospital in Memphis on November 1, 1951 and has located temporarily as an industrial physician at Oak Ridge.

He writes as follows: "I am married, have one child. I am a veteran of World War II with 31 months' service, 19 months of which was spent overseas. My draft classification is 5-A. I am licensed in Tennessee and would prefer a location in East Tennessee, my birthplace being Knoxville. However, I am open to any location where the need is greatest. I appreciate your sincere interest."

LW-2

*

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself.

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital

1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

*

A physician desiring a location in Tennessee writes as follows:

"I am 31, married, with three children, a native of Kentucky even though born in Chattanooga, and had 41 months of service in the Marine Air Corps during World War II. I graduated from Washington University in St. Louis in 1950 and served a rotating internship at St. Louis City Hospital from July 1, 1950, to July 1, 1951. At present I am taking a rotating residency at the charity hospital here in Monroe, Louisiana. The training here has a very large surgical component. My year here will be up June 30 and I will want to go into practice immediately thereafter."

LW-8

*

A physician desiring a location in Tennessee sends us the following information: Age, 32. Married, Graduate, Tulane School of Medicine. Internship, Baptist Hospital Memphis, Tenn. Rotating Residency, Baptist Hospital, Birmingham, Alabama. Two years army service, three years general practice and assistant to an F.A.C.S. He states that he would be available on six weeks notice and would prefer a town with a hospital.

LW-9

General and Thoracic Surgeon

I am 31 years of age, married, and have two children. I graduated from Cornell University Medical College in 1945. I had an internship at Bellevue Hospital, Second Surgical Division (Cornell) following which I served two years in the United States Navy, mostly overseas. Upon my return I taught anatomy at Cornell University Medical College for nine months followed by six months as assistant resident in general surgery at Meadowbrook Hospital, Hempstead, New York. I completed an assistant residency in general surgery at Bellevue Hospital, First Surgical (Columbia) Division. At present, I am completing a two-year residency in thoracic surgery at Bellevue (last six months of this is spent at Presbyterian Hospital as resident in thoracic and vascular surgery).

LW-10

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

*

The following letter has been received in this office:

"The Midland Community Improvement Club has built a medical center and now desires the services of a reputable doctor.

"This building has two offices, a waiting room, toilet and supply room, has oil heat, hot and cold running water, refrigerator and the equipment of the late Dr. V. S. Campbell of Murfreesboro, all of which will be furnished free of charge to a doctor willing to take charge.

"Midland is a rural community located midway between Murfreesboro and Shelbyville, fifteen miles from each place and the nearest doctors.

"We will appreciate any help you can give us in securing a doctor.

"For further information please contact the undersigned:

"Sincerely yours,
James I. Williams
Fosterville, Tennessee"
PW-9

* * *

Physician Wanted

Tennessee State Medical Association
Nashville, Tennessee

Dear Sirs:

I am coming to you for assistance to see if you can help us locate a doctor who would be interested in coming to the City of Cumberland Gap. Our small town of approximately 500 people is the only incorporated city in Claiborne County. We have not had a doctor for some time and we desperately need one. We used to have four doctors here. Any good doctor could easily make two or three thousand dollars a month. Tazewell is 13 miles away and doctors there will not come here, and doctors in Middlesboro, Kentucky, positively will not come over here. Last night I called three and not one would agree to come to see my daughter who was ill.

Anything you can do to help us in securing one or two doctors will be greatly appreciated. Office space and living quarters are available.

Yours very truly,
J. S. Collins
Councilman
City of Cumberland Gap

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville, Tennessee.

ANNOUNCEMENTS

Notice to Participating Physicians in VA Program

The following letter is published for your information:

April 2, 1952

Mr. V. O. Foster
Executive Secretary
Tennessee State Medical Association
504 Doctors Building
Nashville 3, Tennessee

Dear Mr. Foster:

We have just received detailed instructions from our Central Office which provide for a uniform procedure for assessing charges against Participating Physicians who issue prescriptions to Veterans Administration beneficiaries without proper authorization.

Except in emergencies which I shall mention in a later paragraph, it all amounts to just this: When the physician gives a veteran a prescription with the authorization legend on it, the veteran has the prescription filled; the druggist turns it over to the State Pharmaceutical Association for collection and we pay the Association. If the physician has signed the statement on the prescription "I am authorized to treat and prescribe for the above named Veterans Administration patient" but actually does not have an authorization, we must bill the physician for the amount we have paid the Pharmaceutical Association for the prescription.

All physicians are aware of the provisions we have to authorize treatment rendered eligible veterans in emergencies; i.e., (1) the physician can prescribe for a service-connected condition or veteran in training under Public Law 16 and notify us within fifteen days of the emergency, in which case authorization can be given or (2) the physician can prescribe in his office or home of the veteran (but not in a private hospital) for a Spanish-American veteran and notify us within twenty-four hours and funds can be set up for authorization.

I am writing you with the thought in mind that perhaps you would have space in an early issue of your state Journal to call the above to the attention of all Participating Physicians as a few continue to sign the authorization legend when they do not have an authorization from the Veterans Administration to treat the veteran.

Very truly yours,
George A. Hatcher, M.D.
Chief Medical Officer
Veterans Administration

* * *

Dr. Robert Doty has reopened the office of his late father, Dr. Roy A. Doty, at Rogersville. Dr. Doty, who is 32, returns to Rogersville from Roanoke, Virginia, where he has been connected with a Veterans Hospital.

Dr. David P. McCallie has assumed direction of the medical offices formerly maintained by the late Dr. James L. Bibb, of Chattanooga.

Dr. H. G. Barker, Humboldt, has completed a new clinic. The modern structure was described as one of the most up-to-date in that section by the *Jackson Sun*.

Dr. Edgar Keene Bratton, Hartsville, was planning last month to enter into an agreement with local businessmen to construct and operate a medical clinic. A five-bed clinic containing two office suites, an X-ray room, an operating room and several emergency wards was contemplated. Funds were expected to be provided by the county, state, and federal government under the Hill-Burton Program.

Dr. Oliver H. Graves, Jackson, has become a partner with **Dr. John Nuckolls** in the Urology Clinic in Jackson. Dr. Graves has just completed a residency in urology at the John Sealy Hospital in Galveston.

The Lions Club of Earle, Arkansas, honored **Dr. W. J. Wright**, formerly of Lawrenceburg, and his wife with a reception at the Presbyterian Church recently when Dr. Wright opened an office for the practice of medicine in Earle.

★

"Special Notice"

The Tennessee Diabetes Association is sponsoring a camp for diabetic children for a two-weeks period in August, 1952. Children, ages seven through fourteen will be accepted. The camp is co-educational and financial arrangements may be worked out with the Tennessee Diabetes Association. For further information write: Dr. Albert Easley, 301 Medical Arts Building, Chattanooga, Tennessee.

★

Of Interest to General Practitioners

Southern Pediatric Seminar

The 1952 session of the Southern Pediatric Seminar will be held in Saluda, North Carolina, from July 14 through July 26. This is the thirty-first annual session of this institution which has become one of the outstanding postgraduate courses in pediatrics in the country. Following the plan which was put into effect last year, there will be an additional week (July 28 through August 2) devoted to the study of Obstetrical and Gynecological problems.

The Seminar was established and is maintained for the benefit of the general practitioner. Outstanding teachers and clinicians from the various southern states come at their own expense to give lectures, clinics, clinicopathological conferences and demonstrations. The meetings are of an informal nature and there is ample time to present special subjects and questions for discussion. General practitioners from Virginia to Florida to Arkansas who have attended the Seminar can attest to its value.

Held at Saluda, which is in the mountains of North Carolina, many of the physicians bring their wives and families with them and make the occasion a joint period of study and vacation. Such a plan is encouraged by the leaders of the Seminar and every effort will be made to secure accommodations for those who might desire to do this.

The course given at the Seminar is fully accredited for postgraduate requirements in the Academy of General Practice.

Those who are desirous of further information should write to Dr. D. L. Smith, Registrar, 187 Oakland Avenue, Spartanburg, South Carolina.

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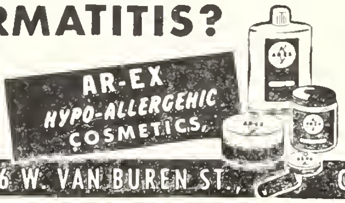

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Complaints falling within the scope of this paper are of almost daily frequency in the office of most doctors. Their proper evaluation can lead in most instances to successful treatment. Thereby useless sacrifice of pelvic organs to surgery can be avoided.

THE OFFICE TREATMENT OF GYNECOLOGICAL DISORDERS*

HARRY E. JONES, M.D., Chattanooga, Tenn.

The gynecological disorders amenable to office treatment include almost all those of so-called medical gynecology, and a sizable number that may be classified as minor surgery. Medical gynecology is concerned not only with disorders *in* the female reproductive system, but also with the numerous conditions and diseases which may *affect* this system and its function. The number and extent of the surgical procedures that can be carried out in the office are limited by the facilities available in the individual doctor's office, though the latter, in this day and time, often is more on the order of a clinic or a small hospital. The number of diagnostic tests and procedures which may be done is subject to the same limitations, but may extend to several score.

It is obvious then that complete coverage of these numerous gynecological conditions, along with their diagnosis and treatment, cannot be made within the necessary limitation of time set for this presentation. For that reason only a brief and clinical discussion of some of the more commonly encountered disorders and their treatment will be presented for your consideration.

First, however, I should like to emphasize what has been brought before us so often—"Every Doctor's Office a Cancer Detection Center." There are few better opportunities to detect early cancer than in the doctor's office in which female patients are seen. Cancer of the cervix and breast—the big killers—*can* be detected early if they are always in mind and a thorough search is made for them. It is appalling to realize that out of every 1,000 white women in the state of Tennessee 35 years of age, 25 are destined to *die* of cancer of the uterus. And of a similar group and age of Negro women, 35 will die of these cancers. We should continue to urge our patients to return at six-month or yearly intervals for examination, so that an ever-increasing number of cancers can be detected in the early, curable stages.

I wish also to mention another generality. A very sizable percentage of the patients who seek aid in the gynecologist's office have a psychogenic rather than organic disease. The pelvis and sex organs bear the brunt of many of the psychoneurotic fixations in the female, and in order to avoid much unnecessary surgery, these should always be considered in differential diagnosis. On the other hand, one should never be guilty of dismissing these women without either an attempt at treatment or a referral to the psychiatrist. Nor should one be negligent in his examination or history because of the ever-present and often treacherous possibility that, although perhaps obviously neurotic, these patients can also have serious organic disease.

Of the specific gynecological disorders to be discussed the first is probably the most frequently seen in the gynecologist's office. It may be manifested only by its presence, or it may be associated with many troublesome symptoms and complaints.

Vaginal Discharge

The cause of an abnormal vaginal discharge can usually be found to be due to one or a combination of the following: (1)

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infestation with *Trichomonas vaginalis,* (2) infection by *Monilia albicans,* (3) cervicitis, (4) mixed bacterial infection, (5) atrophic or senile changes, (6) gonorrhea, (7) ovulation, (8) pelvic congestion, and (9) benign and malignant tumors of the genital tract.

In those common infections or infestations which affect the vagina primarily, treatment is of a dual nature. First, any offending agent must not only be eradicated, but stress should be put on the prevention of reinfection if the source be known. The patient should be instructed as to the proper method of cleansing following urination and defecation to prevent the very common contamination of the vagina with fecal material. Second, treatment is also directed toward restoration and preservation of normal vaginal physiology, the four chief aims being to maintain normal vaginal epithelium, normal glycogen content, normal acidity and a normal bacterial flora.

The Doderlein bacilli which normally inhabit the vagina require, and help maintain by the formation of lactic acid, a pH of around 4. The common offending organisms, *Trichomonas vaginalis, Monilia albicans, B coli,* and the streptococcus, staphylococcus, and gonococcus require a pH between 5.0 and 8.5 for optimal growth and survival. Hence, by preventing vaginal alkalinity alone, especially from alkaline cervical secretions and the alkaline menstrual flow, much can be accomplished toward eradicating these organisms. Often alkaline vaginal douches are used by patients for one reason or another and should be discouraged because of their incompatibility with normal vaginal physiology.

These above principles are applied in the following specific therapy for the various types of discharges.

(1) *Trichomonas Vaginalis Vaginitis.* The acid pH of the vagina is restored and maintained, especially at the time of the menses, with acid douches twice daily. An acid trichomonicide, such as the phenylmercuric acetate or diodoquin preparations, is instilled into the vagina by the patient after each douche. The medication is changed promptly if relief of symptoms does not soon follow, or if evidence of sensitivity occurs. If microscopic evidence of infestation persists after treatment through three menstrual periods, investigation is made of the patient's cervix, urethra and bladder, and the consort's urethra and prostate for the Trichomonas. Proper toilet hygiene is stressed.

(2) *Monilia Albicans (Thrush).* The acid pH of the vagina is maintained as above. An acid antimycotic such as gentian violet jelly, or the ricinoleic and propionic acid preparations, is prescribed for use after each douche, and is to be used through the menses. I believe that medications in the form of jellies are probably preferable to powders or solutions because of the longer contact period and dispersion properties of jellies.

(3) *Cervicitis.* Acute. Systemic and local antibiotic therapy is used, a smear or culture for the gonococcus being obtained prior to treatment. Chronic. Cancer is excluded by the use of smears for cytology and biopsies, the latter being aided in procurement by the Schiller test using Gram's iodine. If the discharge stems from infection localized to the pars vaginalis, acid douches and medications along with antibiotic creams or suppositories are used. Radial cauterization may be necessary as indicated by the response and extent of the lesion. If the infection involves the endocervix, dilatation and electroconization or linear cauterization of the endocervix is done. Because I believe thorough dilatation of the cervix is important in this treatment, I prefer to perform the latter procedures in the hospital. During the healing phase, care is taken by repeated soundings to prevent stricture formation.

(4) *Mixed Bacterial Infection.* The acid pH of the vagina is maintained as above, especially through the menstrual period, by the use of acid douches. Antibiotic creams or suppositories are used to combat the bacterial infection. If there is severe itching or pain, some local anesthetic cream can be used until the symptoms are relieved. Estrogenic creams or suppositories to thicken the vaginal epithelium are often beneficial if the infection is severe and of long standing.

(5) *Atrophic or Senile Changes.* These changes, when they produce symptoms, usu-

ally have associated with them a mixed bacterial infection. The treatment then is much the same as above, some form of estrogenic cream or suppository always being used unless there is some contraindication. The estrogenic response in the vaginal epithelium may be followed with smears, but the obvious gross appearance and clinical improvement usually makes this of academic interest only.

(6) *Gonorrhea.* Unless in children, the gonorrheal discharge is from the urethra, Skene's ducts or the cervix. The treatment of acute gonorrhea is well established by the use of antibiotics administered systemically and needs no further discussion.

(7) *Ovulation.* Cervical mucus changes at the time of ovulation may often be overlooked as a cause of vaginal discharge. This symptom that accompanies the event of ovulation varies widely in different women, some having a fairly copious and easily noticed discharge, occasionally accompanied by a small amount of bleeding. The correlation of the occurrence of the discharge with the mid-cycle, and the exclusion of the other causes of discharge, lead to the diagnosis of this condition. Cleansing acid douches at the time of the discharge is adequate therapy, but they should not be used if infertility is a problem.

(8) *Pelvic Congestion.* That pelvic congestion can cause leukorrhea is well demonstrated in the case of pregnancy or large pelvic tumors, both causing increased vascularity and engorgement with blood and lymph. Another cause which is occasionally noted but elicited by history only is that of congestion and discharge, probably partly from Bartholin's glands, due to ungratified or incomplete sexual stimulation. This condition is encountered in women who for one reason or another, even after prolonged sexual excitement, do not reach sexual climax at the time of intercourse. Or occasionally it is seen in younger women or in girls who engage in prolonged sexual stimulation, such as petting, without completing the sexual act. The treatment, of course, is directed toward correction of the offending practices leading to the chronic stimulation.

(9) *Benign and Malignant Tumors of the Genital Tract.* Occasionally benign tumors such as endometrial or cervical polyps and pedunculated submucous uterine fibroids produce discharge or bleeding. The treatment is removal of the growths, and except for the case of the cervical polyp, is not within the scope of this presentation. Probably any polyp of the cervix, along with its base, should be removed for biopsy. The bleeding site after removal is easily controlled with the cautery.

All physicians are aware of the fact that any bloody vaginal discharge warrants a thorough investigation to exclude cancer. However, many of these bloody secretions due to cancer were preceded for a period of time by a discharge which contained no blood. For that reason, in an attempt to detect cancer of the genital tract as early as possible, it is essential that the physician examine carefully any serous discharge, especially if it does not seem to be caused by any of the common agents. Of noteworthy value for this purpose is the vaginal and cervical Papanicolaou smear for cytological study. By utilizing this technique the vast majority of genital malignancies can be detected in a far less advanced stage than if one waits until frank bleeding occurs. There is a great need at the present for readily accessible laboratories to which the practicing physician can send these smears for staining and interpretation at a reasonable cost to the patient. A few such laboratories are available now, and the smears can be easily and inexpensively made and sent by mail to them. Suspicious or even positive interpretations should be checked by a second smear and verified by biopsy, of course, before definitive treatment for malignancy is instituted.

Primary Dysmenorrhea

Approximately 35 per cent of menstruating women suffer from dysmenorrhea, a large portion of which is classed under primary or functional dysmenorrhea—that not due to organic pelvic disease. The etiology of primary dysmenorrhea is still not well identified, and much the same can be said for the treatment. Without attempting to theorize, I shall briefly present the method of management of these patients which I have found most satisfactory. Many of you here probably have a better method, and I would appreciate hearing your comments during the discussion period to follow.

An estimation of the psychogenic element involved is made and discussed with the patient, with special regard to factors which may influence the pain threshold. Along this line, and also to help prevent pelvic edema, exercise and increased activity for several days before and during the menses are advised. It is surprising how many high school girls do not have their customary dysmenorrhea during their basketball season. On the theory that pelvic edema and congestion may lower the pain threshold, salt restriction for the last half of the menstrual cycle is advocated. These simple measures alone give relief in many cases, but if the results are not satisfactory additional therapy is indicated.

Stronger decongestive measures such as diuresis employing the pyrabrom compounds, and administration of the sodium eliminating resins premenstrually, are employed. A smooth muscle antispasmotic or progesterone may be prescribed. Compounds containing a small amount of Benzedrine or benzedrine-like drugs in combination with a non-narcotic analgesic have proved very effective, the Benzedrine, aside from its usual mood-elevating effects, apparently acting as a uterine antispasmotic. Narcotic drugs are never prescribed for dysmenorrhea.

If the above methods fail to give adequate relief, the use of testosterone in small doses for a few days preceding the ovulatory time is prescribed. Although opposed to the treatment of dysmenorrhea by suppression of ovulation with hormones or other means, I, as well as many others, have noted that in some instances dysmenorrhea is relieved with testosterone as mentioned bove, although ovulation is not suppressed.

If failure follows all the above measures, it is wise to re-evaluate the patient's psychic status as regards her dysmenorrhea. A good test for this purpose is to suppress ovulation for a month and produce anovulatory bleeding. If pain occurs with this bleeding, it is very likely that the problem is one for the psychiatrist. Certainly this simple expedient should be attempted before one considers operative procedures such as presacral neurectomy.

Premenstrual Tension

Many women suffer from what has been termed the "premenstrual tension syndrome." This syndrome is characterized by the occurrence during the premenstrual days of a feeling of emotional tension, depression, headaches, irritability and occasional insomnia and nausea. These women also frequently have noticeable swelling and pain in the breasts, abdominal enlargement and occasionally pedal and facial edema. They may actually show a weight gain of several pounds during this period. Primary dysmenorrhea is common among these patients.

Treatment directed toward prevention and mobilization of edema fluid yields good results in this condition, and is the same as that outlined in the treatment of primary dysmenorrhea. The newer pyrobrom compounds and the sodium eliminating resins have proved more effective than the older ammonium chloride method. Mild sedation is often beneficial, especially if agitation or insomnia are prominent symptoms.

Functional Uterine Bleeding

A large portion of the patients consulting the gynecologist have as their problem one of abnormal uterine bleeding which will be found to be due to endocrine dysfunction. This disorder is usually one of abnormal variation in the frequency, amount and duration of the menses.

The general subject of endocrinology is highly complicated, but the diagnosis and treatment of these bleeding disorders need not be so. In the absence of facilities for gonadotropic and other hormone assays, a few simple tests and procedures usually shed much light on the etiology of the disorder. The daily determination of the basal body temperature, and endometrial biopsy on the first day of bleeding will usually disclose the most common abnormality, that of failure of ovulation. Endometrial biopsy taken on the third and fifth or sixth days of bleeding will usually disclose if there is irregular or delayed shedding of the endometrium. The determination of the basal metabolic rate will reveal thyroid dysfunction, which when corrected often also corrects the concurrent menstrual irregularity. Careful taking of the history will reveal possible nutritional or psychogenic causes of the disordered endocrine function which, of course, would necessitate specific corrective therapy.

Whatever be the cause of the disturbed pituitary-ovarian-endometrial relationship, re-establishment of proper function can usually be accomplished by cyclic hormone replacement therapy. An artificial menstrual cycle is created by administering an estrogen for 21 days, and also progesterone for the last seven of these 21 days. The cycle is begun again on the 5th day of the ensuing bleeding and is repeated for three or four cycles. Resumption of normal ovarian function and correction of the bleeding disorder are the rule rather than the exception. If abnormal function does persist or recur, the cyclic therapy is repeated.

Other than for the control of profuse bleeding, there seems little indication for the use of repeated hypodermic injections of these hormones. Oral medications adequately suffice in the case of the estrogenic drugs, and oral ingestion or buccal and lingual absorption is effective for the progesterone administration. As with any endocrine disorder, the dosage of these hormones varies with the needs of the individual patient.

The use of gonadotropic hormones is reserved only for those patients in whom conception is desired. The equine gonadotropes possess powerful sensitizing properties, and in addition have never been clearly shown to produce permanent restoration of ovulation.

Uterine curettage, although not an office procedure, is occasionally necessary for hemostasis, and is indicated for excessive bleeding in any woman over the age of 35 years to exclude possible malignancy. Also, before hysterectomy or destruction of ovarian function is anticipated in the intractible case of bleeding, curettage should be performed, not only because of its diagnostic advantages, but also because of its ability in some cases to correct temporarily or permanently the bleeding abnormality.

The Menopause

In closing I would like to mention briefly treatment of the menopause, or more correctly, the climacteric in the female. Undoubtedly many complaints and diseases in the middle-aged woman are attributed to the climacteric which in no way are related to it. One should attempt to establish accurately, if possible, that the amenorrhea, menstrual irregularities, or various vasomotor and other symptoms are really due to changes of the climacteric because: If they are, they almost always can be successfully relieved by estrogen therapy. If they are not, this therapy will have little or no desired effect.

Although slightly more expensive, the naturally occurring or conjugated estrogens seem to cause fewer undesirable side effects such as nausea and uterine bleeding than do the synthetic estrogenic compounds. Recently estrogen and testosterone combinations have become commercially available and have proved highly satisfactory in that the testosterone often produces an added sense of well-being so needed in these patients, as well as frequently increasing the libido. There is evidence also that less uterine bleeding is produced by the combination of the two steroids than by estrogens alone. It is always desirable to use as small a dosage of the estrogenic hormones as possible in the treatment of the climacteric, because when postmenopausal bleeding occurs it must always be differentiated from that due to an unrecognized malignancy.

The presence or history of certain breast cancers, uterine cancer, and endometriosis are contraindications to the use of estrogens in the treatment of climacteric symptoms. In such cases testosterone alone, if it can be given in doses below those producing undesirable masculinizing changes, often gives good results. Also, the alpha-tocopherols or vitamin E apparently relieve some of the climacteric symptoms and may be employed as an adjunct to testosterone in those patients in which estrogens are contraindicated.

An additional, and often very effective, adjunct to hormonal therapy is sedation given in small amounts. Frequently this is all that may be necessary to control the mild fluctuations in the vasomotor system at the time of the climacteric.

Discussion

EDWIN L. WILLIAMS, M.D. (Nashville): Mr. Chairman, Members of the Association, Ladies and Gentlemen.

It is always a pleasure to hear Dr. Jones present a discussion of any subject not only because of its scientific value but also because of the clear and concise method of presentation. There is nothing which I have to add with regard to the material which he has presented in such a complete fashion.

There is one aspect of office gynecology, however, which I would like to discuss which has nothing to do with the mechanics of the physical examination and laboratory studies. I refer specifically to the scheduling of office appointments. Prior to the time of the medical acceptance and utilization of current surgical techniques, surgical procedures were almost invariably conducted as emergency operations; the doctor leaving the more routine treatment in order to carry out the necessary emergency surgery. We have now almost completely changed this trend and most surgical procedures are planned at least a few days in advance, and in many busy hospitals the operative schedule is actually organized a week or more in advance except for relatively rare emergency surgery. Such a plan is welcomed by all busy practicing physicians inasmuch as it gives an opportunity to better anticipate the day's activities. Unfortunately, meager attention has been given to allotting special office time for special types of office patients. Those of us who treat pelvic diseases are becoming increasingly aware of the so-called psychosomatic aspects of gnecology and considerable attention is therefore being given to problems which fall in this category. Dysmenorrhea of the primary, or acquired, type; functional disturbances of menstruation; difficulty in the physical adjustment to marriage with frigidity of the female frequently resulting; both minor and major endocrine disturbances, manifest either by hyperirritability or lassitude, are examples of the "problem cases" in gynecology. In general, women with disorders of this type are not candidates for a hurried history and an even more brief physical examination. Their histories are complicated and their physical examinations frequently require more concentration than does the palpation of a pelvic tumor or the identification of a type of leucorrhea. In order to more adequately treat this group a rather definite program of office procedure must be kept in mind. It is my opinion that these patients should be separated, at least to some degree, from the more organically directed disturbances and that the practicing physician set aside the required number of hours during the course of his office week for a more detailed discussion of the woman's problems and a more thorough investigation in her physical examination much as he schedules his operative procedures. Such a program would likely require only two or three hours a week and would result in benefit to the patient and give satisfaction to the physician because of a more careful work-up. Frequently, women in this category are treated best if a discussion can be carried out with the husband. An office routine which provides for such interviews at the end of the usual office day or on certain days during the week would prove both beneficial to the patient and her doctor.

Again I want to thank Dr. Jones for his beautifully prepared presentation.

The Care of Hand Injuries: VI. Open Fractures, Bull. Committee on Trauma of the American College of Surgeons.

The same purposes hold for the initial treatment of open fractures of the hand as have been previously described for the care of wounds of the hand in general. The hand should be splinted in the position of function, and shock and pain treated as necessary.

Definitive Treatment: An X-ray examination should be done with the initial dressing intact. After the extent of the injury has been determined, the patient should be taken to the operating room, and under suitable anesthesia, the dressing removed and the hand cleansed by the use of soap and water, and the removal of devitalized tissue. All possible bone and skin should be saved. The criteria for repair have been described in Bulletin IV. Open dislocations should be reduced. Bone fragments in the wound restored as nearly as possible to a normal position but without fixation by foreign material. Maintenance of reduction may be obtained by skeletal traction or appropriate splinting. Maximum skin coverage should be obtained with especial care to cover bones, joints, tendons, and nerves. A pressure dressing is then applied and the hand splinted as nearly as practicable in the position of function. The hand should then be elevated.

Subsequent Treatment: In their order of importance (1) control of infection, adequate drainage, (2) establishment of bony union and joint healing, (3) early completion of skin coverage and healing, are the factors that govern later care. Infection in the wound may require early dressing, but this should be done in such a manner that the position of the fractures will not be disturbed. Large skin defects should be replaced by grafting at the earliest possible moment. Restoration of function can be best accomplished by directed exercise and occupational therapy as soon as there is firm bony union. Often the injured hand may require later reconstructive surgery, and the early proper management of injuries as described above facilitates such surgery. (Abstracted by Benjamin F. Byrd, Jr., M.D., Nashville.)

It is the author's opinion that the great majority of diabetic patients need not be hospitalized to introduce them to a regime of control. It is his feeling that this is accomplished better on an ambulant basis, in as simple a fashion as possible. The office management in the average patient is such as to make it entirely feasible in the hands of the family doctor.

OFFICE MANAGEMENT OF THE DIABETIC PATIENT*

PHILIP K. BONDY, M.D.,† Atlanta, Ga.

The patient with diabetes mellitus suffers from a chronic disorder involving the metabolism of carbohydrate, protein and fat, and frequently associated with varying degrees of damage to the blood vessels, nervous system and eyes. The physician treating the diabetic patient must attempt, in so far as possible, to return the metabolic state to normal without unduly disrupting the patient's life. Although the maintenance of a normal metabolic status is not a guarantee against the development of vascular and retinal damage, it appears that these complications may occur less frequently in the well-controlled patient.

In the past, routine hospital admission of new diabetic patients has usually been advocated. The purpose of this initial period of hospitalization has been to indoctrinate the patients into the mysteries of dietary management and to teach them the use of the equipment necessary for the administration of insulin. It has been our experience, however, that the period of initial hospitalization is unnecessary in most instances, and may, indeed, be harmful. The diabetic must be taught to live his regulated existence in a framework of normal activity; he must be able to earn his living, enjoy the usual social and athletic activities to which he has been accustomed, and even to fulfill the demands of parenthood. He must, in fact, be able to act like a normal person. The hospitalization period may tend to impress on the patient the misapprehension that he has so serious a disease that he can never again be normal. The patient who, otherwise feeling quite well, is found to have mild diabetes and is therefore immediately rushed into a hospital may never again be reconciled to his ability to carry on a normal existence.

It has been the practice at Grady Memorial Hospital to admit to the hospital only those patients who present themselves in diabetic acidosis or with another disease requiring admission. Other newly discovered diabetics are regulated initially in the outpatient clinic on their normal activity load.

The keystones of the treatment of the diabetic patient are dietary control and insulin. The use of the diet to control diabetics has been modified radically since insulin was introduced, so that today the usual "diabetic diet" is not very different from the normal American diet in caloric or carbohydrate content. Table 1 shows the caloric and carbohydrate prescriptions of 87 diabetic patients seen in one day at the diabetic clinic at Grady Hospital. Of the women in this group, 20 were obese and were therefore receiving a reducing diet of 800 to 1,000 calories. This diet is identical with the reducing diet used for non-diabetic patients. The men and women of normal weight received diets which are not very different from the

Table 1

Diet Prescriptions for Diabetics

	No.	*Average Calories*	*Average Carbohydrates*
Women	62	1,313	142
Women, excluding obese	42	1,503	152
Men	25	2,036	181
Normal Grady Memorial Hospital diet		2,300	250
Same, with no added sweets		1,895	196

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

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normal diet. For comparison, the routine ward diet at Grady Hospital is included in the lower part of the table. If the diabetics eat the ward diet, simply omitting such high-carbohydrate items as pies, cakes, ice cream, and substituting for these a piece of fruit, their diet is not significantly different from the prescribed diet.

The advantage of the accurately regulated diet in the treatment of diabetes lies chiefly in the fact that the body is presented with a consistent and reproducible carbohydrate load each day, so that the dosage of insulin can be estimated with some confidence and severe degrees of hyperglycemia or hypoglycemia avoided. The responsibility of the physician, therefore, appears to be to prescribe a diet adequate in protein and vitamins which is so constant in distribution that the use of insulin will be effective and safe. These requirements can be met quite readily by modifications of the normal American diet without the need for accurate measurement or weighing of the diet. Such a prescription permits the patient to eat from the family table or to go to restaurants without difficulty. It makes it possible for him to live in a normal pattern without inconvenience and without embarrassment. Moreover, the details of such a diet can be conveyed to an intelligent patient in a few minutes. Most people who have been eating a nutritionally adequate diet can continue as before, except for the elimination of sweet desserts and between-meal snacks. They must be cautioned against skipping meals and against occasional overeating.

Obese diabetic patients are handled as though they did not have diabetes, from a dietary standpoint. With closely restricted caloric intake many of these patients have rapid amelioration of the diabetic symptoms and may be controlled without insulin. In any case, weight loss is the chief problem and must be attacked vigorously.

It has been our goal to control all diabetics who require insulin on a single daily injection of insulin. The introduction of NPH insulin has made this goal attainable in most of the cases. New patients are usually started on a small dose of NPH—10 or 15 units—which is administered by the office nurse. For the first few days the patient returns to the office or clinic each morning before breakfast. The insulin is injected by the patient under the supervision of the nurse. Within a few days most patients can carry out the injections without further help. At the same time, the patient is taught to test his urine for reducing substances. We have found the Clinitest (R) tablets to be the simplest apparatus for this purpose. The patient tests urine passed just before breakfast, lunch, supper and at bedtime until the dosage of insulin has been adjusted. Thereafter, the urine passed during the half-hour before breakfast is tested daily. During this time, the daily glucose excretion is reviewed and the insulin dosage changed to fit the patient's requirements. As the diabetes comes under control, the dose of insulin required for regulation usually falls gradually, so that the final adjustment may not be reached for several months. Moreover, changes in the patient's metabolic and physical status may necessitate readjustment of insulin at any subsequent time. The insulin prescription should therefore be kept under frequent review, even after it appears to be stable. We seldom permit more than three months to elapse between office visits.

During the first few days the patient should also be indoctrinated in the special problems he must face. The symptoms of hyperinsulinism and the use of carbohydrate as an antidote are particularly emphasized. Care of the feet and skin, and prevention of such dangerous complications as ingrowing toenails, infected calluses and chafed skin on the feet are emphasized. The early signs of acidosis are also described and the need for immediate medical attention is stressed.

All diabetic patients should carry identification cards, indicating the nature of their disease, and the emergency measures to be carried out should they be found unconscious or become involved in an accident. Such a card should include the patient's name, address and usual insulin dosage. The name and address of the physician should also be included. Cards of this type are available from the American Diabetic

Association, but they can easily be prepared in the doctor's office if official cards are not available.

What sort of results can we hope to attain by the regimen outlined above? The patient should be able to maintain a normal carbohydrate metabolism with only occasional mild glycosuria. In older patients, however, the insulin dosage should be adjusted so that a slight trace of glycosuria is usually present before breakfast. In this way, the danger of hypoglycemia during the night when the patient is least able to cope with it can be reduced. It should be emphasized that the danger of producing myocardial or cerebral infarcts as a result of hypoglycemia is much greater, especially in patients past middle age, than the danger of damage from mild glycosuria.

The patient should maintain a normal or slightly subnormal body weight (10 per cent below usual standards is often advised). Children controlled in this way should be sufficiently well nourished to permit normal growth and development. Most important of all, the patient should be able to carry on his normal activities without difficulties or inhibitions imposed by his disease.

The Postoperative Recognition and Further Management of Unsuspected Cervical Carcinoma. William F. Finn, M.D., Am. J. Obs. & Gynec., 63:717, 1952.

A new clinical problem has arisen. This is the recognition of unsuspected cervical carcinoma after hysterectomy has been done for myoma or prolapse. This problem formerly occurred after vaginal hysterectomy or amputation of the cervix, but now is increasing with the greater performance of total hysterectomy.

Carcinoma of the cervix was discovered postoperatively in 21 patients during the past five years at the New York Hospital. Nineteen of these were squamous, 9 were Stage O, and 10 were Stage I, while 2 were adenocarcinomas. One per cent of all hysterectomies resulted in undiagnosed cervical cancers. Sixteen were asymptomatic and had no physical signs, while five deserved further preliminary diagnosis, because of erosion, contact bleeding, or post-menopausal bleeding. Multiple biopsies of the squamocolumnar junction and curettage or aspiration smears of the endocervix would have resulted in preoperative diagnosis of the cancer. Nine of the cancers were in the endocervix, 10 at the squamocolumnar junction, while only 2 were on the exocervix. The cervical cancers which are most likely to be undiagnosed are (1) those of the endocervical canal, (2) squamocolumnar junction cancers, (3) very early cancers of the exocervix, and (4) cancer associated with descensus.

None of the patients with Stage O cancer were treated further. One-half of the patients with Stage I cancer, and all of the patients with adenocarcinoma received irradiation. No additional surgery was done to remove tubes or ovaries. Problems in therapy consisted of (1) selection of the appropriate time to start treatment, and (2) postponement of the use of the vaginal cone during the immediate postoperative period. All patients are living and without evidence of recurrence. Fourteen patients have been observed for over two years, while seven are current patients.

The increased use of total hysterectomy is associated with an increase in the postoperative microscopic diagnosis of hitherto unsuspected cervical cancer. Conversely, carcinoma of the cervical stump is apparently declining. These cancers are usually asymptomatic, are located in the endocervical canal or at the squamocolumnar junction, and are usually first diagnosed microscopically. About 1% of the total hysterectomies performed at the New York Hospital between 1947 and 1951 resulted in the detection of hitherto unsuspected cervical cancers. Twenty-five per cent of the Stage O cervical cancers, and 6% of the Stage I cancers were so diagnosed. Additional preoperative diagnostic tests were indicated in five of the patients, 25% because of cervical lesions or unusual bleeding. Multiple biopsies at the squamocolumnar junction and aspiration smears and/or curettage of the endocervix would have detected these cancers. Stage O cervical cancer already treated by total hysterectomy requires only observation, while Stage I cancer apparently deserves abdominal X-ray irradiation. Dr. William P. Healy in discussion, observed, "I personally would not be inclined to use postoperative roentgen irradiation in any of these unsuspected cases. The primary surgical procedure has done a great deal more for the patient's future well-being than any subsequent radiation therapy." (Abstracted by Hamilton V. Gayden, M.D., Nashville, Tenn.)

The successful use of placental membranes as homografts for the covering of wounds is of interest. If their use proves to be consistently satisfactory and helpful, it is likely that many conditions will be found in surgery for their application.

HOMOGRAFTS OF FETAL MEMBRANES AS A COVERING FOR LARGE WOUNDS—ESPECIALLY THOSE FROM BURNS

AN EXPERIMENTAL AND CLINICAL STUDY

(A Preliminary Report)

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Though the indications for the use of embryonal or fetal membranes in surgery may prove to be very wide, at this time, however, I shall refer to its use in burns only.

In patients having 50 per cent or more of the body surface burned, the covering of the wound soon becomes a matter of critical importance. Pressure dressings, whose value we re-emphasized in 1923,[1] as well as other methods to promote a surface coagulum, such as the tannic acid or the so-called exposure method, may help in certain cases. In the larger, second and third degree burns there is urgent need for a "living covering" which will prevent the loss of fluids, electrolytes and blood elements as well as to protect delicate nerve endings, and which will last for a prolonged though not of necessity a permanent period.

The great amount of work which has been done on homografts of skin in extensive burns, and the attempt to prolong their periods of takes, is evidence of a recognized need for a covering tissue other than the individual's own skin. Yet in our experience, as in that of many others, a relatively small percentage of homografts of human skin last more than a period of four weeks. After this, in most instances, they slough away either suddenly or gradually.

It was the realization of this need for a satisfactory covering for burns and my work in Dr. Ernest Goodpasture's laboratory, which proved that human skin and membranes can be successfully grafted on the chorio-allantoic membrane of chicks,[2, 3] that led us to the belief that human amniotic and chorionic membranes might be used as homografts on human wounds.

Our first experiments began in March, 1951. This work concerns the use of living and not boiled nor dried preparations. It is interesting to note that Penfield, Humphreys and Chao[4] in 1940, and a year later Kohnstan, suggested the use of "amnioplastin," a preparation made by the immersion of amnion in alcohol for fixing, followed by drying in sheets and boiling in water for twenty minutes for sterilization. This was washed in normal saline before use. This fixed, dead amnion preparation was employed by these authors as a covering to prevent adhesions during operations on the brain. Later Pinkerton[5] and others used it for mobilizing adherent tendons fixed by adhesions.

During the past fifteen years many articles have appeared in journals on ophthalmology referring to the use of small pieces of dead, fixed amnion to favor healing and to prevent adhesions in caustic and corrosive burns of the cornea and sclera. All of these articles refer to the use of "amnioplastin" or similar preparations of boiled or otherwise fixed membrane. Amnion, the thinner of the membranes, was first used as a graft for formation of an artificial vagina in 1935 by Brindeau and by Burger in 1937.[7]

I have found no reference in the literature to the use of the thicker membrane, chorion, which has been our choice thus far. However, to Kubani[6] of Hungary belongs the credit for advocating the use of living amnion as a homograft for wounds from burns. Between the years of 1941 and 1948 he grafted it on wounds sixteen times, in four the grafts being larger than the palm of the hand. He describes two of the latter which were successful and states he made microscopic sections of the amnion in one though giving no findings. He also used sterile amnion to cover raw surfaces of the peritoneum after separating adhesions.

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Origin and Nature of Fetal Membranes

Bailey and Miller[7], in describing the development of the amniotic folds enclosing the fetus, dorsally and laterally, speak of the amniotic cavity "which is lined by ectoderm continuous with the ectoderm (later epidermis) of the embryo—the ectoderm, lining the cavity and the overlying parietal mesoderm together constituting the amnion." Regarding the origin of the chorionic membrane they say: "that the outer parts of the amniotic folds become completely separated from the inner—the (true) amnion, to form a second membrane consisting externally of ectoderm, internally of mesoderm, and called at first the serosa or false amnion, later the primitive chorion."

At term, a great abundance of amniotic membrane is folded up in the region of the placenta. The chorion is adherent by hyaline mesodermal connective tissue to the same type of connective tissue of the amnion. In its connective tissue layer are a few blood vessels. Its outer or external layer is composed of a fairly thick layer of transitional cuboidal epithelium which makes its gross appearance somewhat more opaque and white than the thinner and more transparent amnion. Distalward from the placenta the two membranes are adherent to each other for quite a distance, but finally at the most distal portion one finds only amnion.

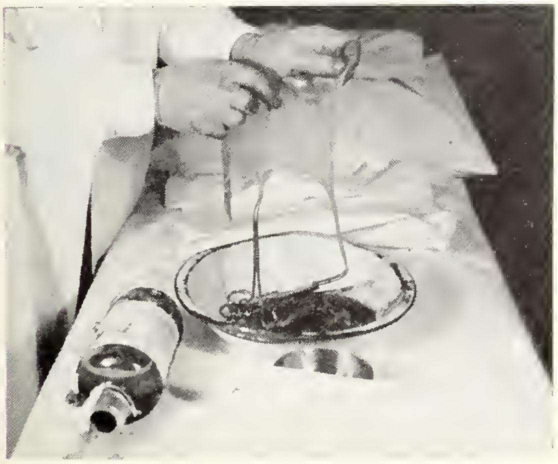

FIG. 1. Separation of amnion, right from chorion, left for purpose of grafting wounds.

In practice, for grafting purposes, the two membranes are easily separated with the sterile gloved fingers, so as to obtain sheets of each up to 18 inches square. (Fig. 1.) Somewhat more of amnion may be obtained in each instance than of chorion.

Collection of Material

For our purposes, placentas from recent deliveries of patients with negative serologic tests for syphilis are placed in sterile covered pans. The amnion may then be separated from the chorionic layer (Fig. 1) or the two may be left together. Large pieces may then be cut away from the placental and cord attachments. Before cutting apart the attachment between the membranes, the outer or epithelial layers of each are labeled with sterile skin clips or other markers for future identification. The membranes are then washed with normal saline, folded on themselves with a little plasma or saline between the folds and are wrapped in sterile cellophane or pliofilm. A sterile towel moistened with saline is wrapped around the cellophane and the package stored in a refrigerator at one or two degrees above freezing until required for grafting. We have grafted membranes successfully after storing them for four days by this technique, but there is no reason to believe that they could not be used after much longer periods. If desired, the membranes may be sterilized and quick frozen, by the method of Keeley and Gomez, reported for preserving arterial segments for grafting. They may then be kept for several weeks before being applied. If one wishes absolutely sterile membrane, it may be obtained from cesarean section cases, although those from normal deliveries may easily be sterilized without difficulty.

Experimental Work

It was realized at the beginning of our work in 1951 that if human membranes were used in animal experiments they would be heterografts, and therefore less likely to take than homografts of human membranes applied to human wounds. But having had success with heterografts of human skin to chorio-allantoic membranes of fetal chicks and human membranes to chick membranes we carried out the following experiments on ten dogs.

Under sterile conditions large wounds, as deep as the muscle, were made on the abdomens of female dogs. Amnion and chorion, respectively, were sutured on these wounds. Control wounds of equal size were made also. In most experiments the connective tissue layer of each membrane was applied to the wound surface. In some the epithelium was turned inward with good, though slower takes. It is a well-known fact that deep or pinch skin grafts take, but their take is slower when placed epithelial surface down on wounds. In another series of animals, as well as in some of the above, the two membranes were buried under trapdoor pedicle flaps in order to provide absolutely sterile conditions.

Except for one dog in which infection took place, the membranes showed successful takes for the entire periods studied,—one as long as twenty-nine days. The results of the take of amnion and chorion at five days and at fifteen days were recorded by photographs. At the fifteen-day period the wound covered with amnion had been reduced to only one-fourth the size of the control wound. In general, the dressings separated readily from the surface grafted with the amnion leaving a shiny, dry, pinkish surface. The chorion grafts were more opaque and more of a salmon pink color.

Microscopic sections of the grafts, in general, gave similar findings for varying intervals after operation up to seventeen days. (Dr. Goodpasture studied the sections.) Microscopic studies at seventeen days after grafting shows the wound to be still covered with a homogeneous hyalinoid membrane which is stained pink, and seems characteristic of the hyalin connective tissue layer of the amnion. It is moderately infiltrated with leucocytes. Chorion removed from the wound surface at the same time showed the cells of the membrane alive with little sign of degeneration. In other sections of chorion and the adjacent skin edge, sixteen days postoperatively, the chorionic cells have actually adhered to the dog's connective tissue and the underlying capillary bed. The chorionic cells are viable and mitotic figures are present.

The findings in the specimens of the membranes buried in pockets corroborates the findings as to their viability, thus giving us a check on the surface graft experiments under conditions of more nearly perfect sterility. Longer time follow-up experiments are in progress.

Application of Amnion and Chorion as Homografts to Humans

It was clear after we had seen these membranes take and live, even as heterografts on dogs, that they should live as homografts on members of the same species.

Homografting was first done successfully on humans in March, 1951. The patient had extensive wounds from a burn.

Brief reports on this case and two others of successful grafts on humans are included here. Detailed reports will be published elsewhere.

Case 1. V.U.H. No. 196,623. A woman admitted on March 9, 1951. Diagnosis: Extensive burns. A specimen of fresh amniotic membrane, removed from a placenta and sac, was kept as near sterile as possible at delivery and was then washed in normal saline. One hour later it was applied to the granulating surface of a burn around the upper third of the right leg, immediately below the popliteal space. This membrane was approximately 7 x 4 inches, or 28 square inches in size,—roughly the size of a full drum of skin cut by a large skin graft machine. It was sutured in the manner of a thick split graft with stitches at the edge and "quilting" stitches through its surface to hold it down into the deepest parts of any depressions. A few perforations were made in it for drainage. The wound was only fairly clean. Granulations were scrubbed with ether and the skin edges were prepared with weak iodine followed by alcohol. Three drums of skin from her brother were applied as homografts to the same, and the other extremity, respectively. Sulfathiazole powder was dusted sparsely on the surface of the amnion graft and dry gauze and elastoplast were used for light pressure over all. (In burns of the extremities, since large sheets of membranes may easily be obtained, they may be stretched around the extremity, stitched to themselves, and a pressure dressing applied over all.)

The dressing, seven days postoperatively, showed the membrane taking in large part. The dressing came off easily, being adherent only at the perforations where a few granulations were still showing.

At dressing, 13 days postoperatively, the amnion was still adherent and apparently healthy. At this time, because of the urgency of obtaining permanent healing, squares of it were excised and supplanted by similar squares of the patient's own skin in "checkerboard" fashion. The patient's condition had improved by this time and she was in good nitrogen balance probably due to the three homografts of her brother's skin and the membrane grafts.

At 21 days postoperatively the portions of amnion grafts which had not been removed still appeared dry and adherent to the wound, affording a good nonexudative surface, but was apparently being undergrown at its edges by the patient's own autografts. The brother's skin was inflamed and was evidently sloughed off. It was replaced by the same type of autografts.

Microscopic sections in this case were reported by Dr. Goodpasture as follows: "Thirteen days postoperative, granulating surface lined interruptedly, but almost completely with fairly thick hyalinized membrane which in places is so folded upon itself as to suggest very strongly an origin in the hyalin portion of the amniotic membrane. In a few foci this membrane has the light staining character of hyaline amnion which appears swollen by imbibition of fluid in such a way as to give it a vacuolated and fibrillary appearance."

At twenty-one days sections showed the same homogeneous thin pink staining hyalin membrane. On subsequent dressings the autografts applied to both the membrane and brother's skin areas were found to have spread out and supplanted both homograft areas and to have caused both to heal.

These promising results led us to try several further membrane homografts in other human cases, always with the full consent of the patient. We shall give only two further abstracts very briefly.

Case 2. V.U.H. No. 205,931. A 45-year-old colored female, who had numerous granulating areas on her body from a burn, was operated upon on February 15, 1952. During a split skin graft procedure, a sheet of chorion two inches square was sutured into a pocket made at the edge of one of the donor areas by undermining the skin immediately below the derma, implanting the chorion and closing the superficial wound.

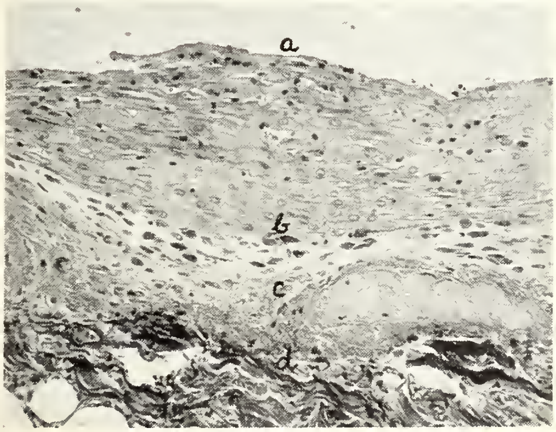

FIG. 2. Photomicrograph of chorion buried in pocket at edge of donor area on chest from which split graft had been removed. See Case O.H. Layer of chorion above is intact, a-b-c, and cells have healthy nuclei. Connective tissue layer, b-c, is united with that of human, c-d.

The specimen removed "en bloc" fourteen days postoperatively showed that the chorion membrane was alive and had healthy nuclei, both in the epithelial and connective tissue cells. Only where the circulation was impaired, due to the rolling of the chorion on itself, was there any sign of degeneration and no hemorrhagic condition was present to indicate anaphylactic phenomena. (Fig. 2.)

Case 3. V.U.H. No. 208,262. A white male, aged 27 years.

A sheet of chorion, collected at a delivery within the hour, was washed with saline and applied to a site on the right, lower dorsal region, from which a split skin graft had just been cut. Four sutures, one at each corner of the membrane, were used to fix it in place on the area. (Fig. 3.) A dry dressing overlaid with elastoplast was applied.

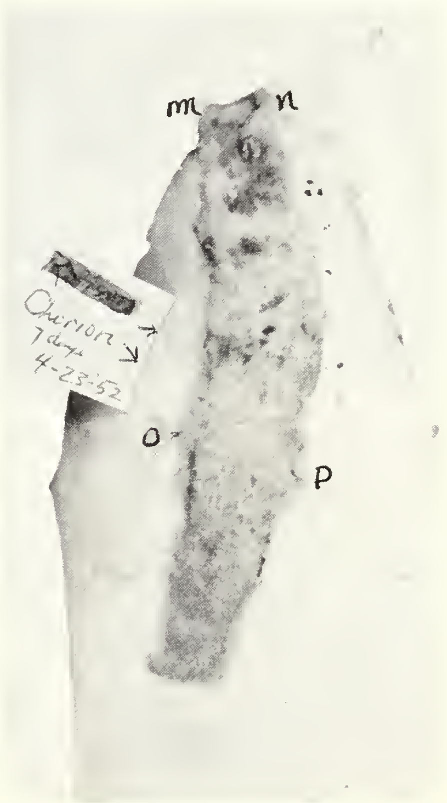

FIG. 3. Living chorion on wound of lower dorsal region, 7 days postoperatively, between stitches at corners m-n-o-p.

At dressing seven days postoperatively the area of chorion included between four sutures was found to be entirely dry, salmon-colored and nonadherent to the dressing, while other donor areas, including those immediately below and above the membrane, bled freely. A portion of the membrane which overlay the normal skin edge was parchment like, and on lifting up a portion of the healed adherent membrane it was pulled away from its bed or base which bled freely, strongly suggestive of a take. No exudation had taken place anywhere except at one or two areas under the upper portion of the chorion graft where two small blisters had formed.

Dr. Goodpasture reported the following results of microscopic finding in this chorion homograft (Fig. 4):

"The chorion cells have survived. The membrane is preserved on the surface. A thick layer of chorionic epithelium is present. In some areas the chorionic epithelium is undergoing necrosis and is infiltrated with PMN cells, but throughout, the chorionic epithelial cells the nuclei stain well, and the cytoplasm has normal staining qualities. In other areas, although no mitotic figures are seen, the chorionic cells are well preserved, and the nuclei are normal."

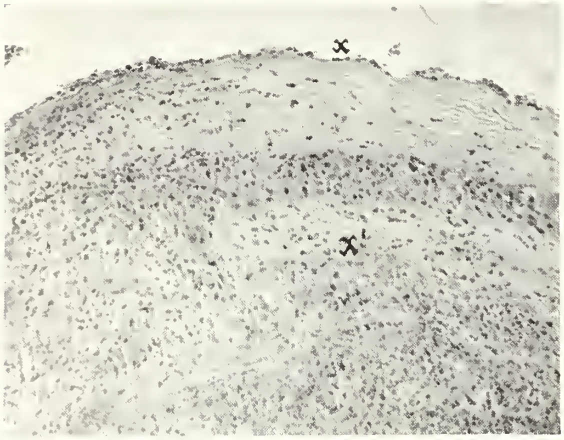

FIG. 4. Patient R.R. photo-micrograph showing thick protective layer of epithelium and connective tissue cells of chorion between X and X' which has united with cells of patient.

It was of interest that at subsequent dressings the donor area grafted with chorion appeared to look better and give the patient less pain and irritation than did other donor skin areas from which grafts had been taken on the same day. Other sections are being made at intervals to determine how soon the chorionic cells are substituted for by the underlying and surrounding epithelium of the patient.

Comment

It is not necessary to point out how easy and impersonal it is to obtain this widely distributed human material which at present seems to find its only destiny to be "thrown into the bucket," especially if it is normal.

Many uses for placental membranes may be foreseen in surgery alone, provided it behaves for others as it seems to be behaving for us. Its advantages, not only in burns, but in other small and extensive wounds are obvious. Membranes should be helpful in preventing adhesions in tendon injuries. We believe that dressings over small wound surfaces may be prevented from adhering and bleeding when removed later, if a small piece of membrane is first applied. After all, at one time it was continuous with the actual skin of the fetus.

We do not know as yet, but we hope to have the answers soon to the question of whether or not it will give a permanent wound covering for more than six weeks. Our work thus far certainly appears to indicate that it will provide a very efficient living for a considerable period of time, and that it can be a very present help in burns just as homografts of skin have been in the past. It is obvious that no grafting of membranes should be done unless the recipient and his wound are as well prepared surgically as we would be demanded for skin grafting. The same postoperative care must be carried out in detail.

More work is needed on the early extensive debridement of burns and their covering with membranes until skin can be substituted. Other questions also must be answered.

What conditions will favor survival of the membrane grafts? How long under optimum conditions will they survive? What is the best way to sterilize them without affecting their viability, and how long can they be safely stored under refrigeration before use? Do the membranes contain specific factors like homografts of skin? Will the capillary vessels invade the grafts giving stable healing, or will there be only a plasmatic circulation? By providing a living covering will the membranes prevent cicatricial contractures by lessening scar formation until skin can be substituted? What is the value of preserving membranes by freezing for military purposes?

Work is already under way which will help to solve many of these problems and further reports will be forthcoming.

Conclusion

1. Large living grafts of both human amnion and chorion, when applied to fresh wounds of dogs and humans, have been proven to take and remain viable under the

conditions and during the periods of time described.

2. These membranal grafts appear to cover delicate nerve endings, to prevent contamination of the surface on which they take, and loss of fluids and electrolytes therefrom.

3. Microscopic sections of chorion grafts reveal that the chorionic membrane cells are in the living state at least as long as 17 days after application.

4. Similar sections of amnion on wounds show the surface to be covered with a membrane composed of mesodermal hyalin fibrinoid tissue which appears to afford a satisfactory covering for the wound surface. On a human wound this hyalin membrane appeared at three weeks to afford as good a protective covering as did a homograft of brother's skin applied simultaneously to the same patient.

5. Grafts of amnion and chorion offer a widely distributed and readily available impersonal source of material for the purposes outlined and are much more easily obtainable than homografts of human skin.

6. Further studies of their use on extensive wounds and of their maximum survival time are already in progress.

7. Their widespread use on extensive wound surfaces is not advocated until these more advanced studies are completed.

The author wishes to acknowledge with gratitude the kind help of Dr. Ernest Goodpasture throughout this work, and to thank members of the Department of Obstetrics and Gynecology for their help in collecting the membranes.

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Hyperglycemia in Coronary Thrombosis, Ellenberg, M., Osserman, K. E., & Pollack, H., Diabeties, 1: 16, 1952.

Almost 25% of the patients who suffer an attack of coronary thrombosis have a transitory glycosuria and hyperglycemia. In these patients glucose tolerance tests performed within two weeks following the attack of coronary thrombosis are universally abnormal. When the tolerance tests are repeated much later they are ordinarily found to be of a normal type. The explanation for these changes in glucose tolerance is not clear.

The authors studied 75 consecutive autopsied cases of coronary thrombosis. In those in whom glucosuria occurred, circulatory collapse had been observed and the electrocardiogram indicated an extensive involvement of the myocardium. The average patient survived 6.3 days. At autopsy the infarcted area was large, and central liver cell necrosis was present. In the patients who did not have glycosuria the infarcted area was small, liver cell necrosis was not present, and survival time before death was much greater (average 20.3 days).

In known diabetics the metabolic upset was intensified only if shock occurred.

The authors conclude that the hyperglycemia occurring in acute coronary thrombosis is a manifestation of shock and is accompanied by central liver cell necrosis. This phenomenon is independent of the presence of diabetes mellitus. (Abstracted for the Tennessee Diabetes Association by Albert Weinstein, Nashville.)

The not infrequent instances of obstruction at the bladder neck make this subject one to be kept constantly in mind. The doctor is aware of its frequency in the older man. But does he consider such a diagnosis in the child, or even the infant, having urinary symptoms?

THE NATURE OF OBSTRUCTION ABOUT THE BLADDER NECK*

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In a discussion of this subject it is obvious that in order to be specific and encompass material in a set period of time limitations will be necessary. Nevertheless, in a general way it may be said that any abnormal organic or functional elevation at the internal urethral outlet will in all probability offer obstruction to the outflow of urine. The result of this is an affection of the mid-urinary tract function, and following this the force begins to be exerted on the upper urinary tracts. In the functioning urinary channel there is consistent continuity between the elaboration of urine at the glomeruli and the free point of evacuation at the terminal urethra. Any impediment to the course of this flow of bilateral columns of fluid above the ovoid reservoir in the mid-urinary tract with its tangent forces of fluid, and the resumption through the urethra of a single column of force as urine flows out will set up a morbid process. This disease process may not be a factor eventually resulting in the formation of a stone nor in the production of hydronephrosis. The abnormality may vary from a persistent remnant of a mucosal bud prejecting into the urinary stream to something as great as a prostatic tumor which completely prevents the emptying of the bladder. With these general remarks one may proceed to a more detailed discussion of the factors involved and the nature of bladder neck obstruction.

Types of Bladder Neck Obstruction

Congenital Abnormalities of the Bladder Neck

Elevated mounds and distortions about the bladder neck are not infrequent findings in children. They produce varying degrees of obstruction and interfere with the mechanism of opening and closing the bladder outlet. Often they are mild and are simply followed by the symptoms of frequency and nocturia which eventually result in hypertrophy of the wall of the mid-urinary tract. On the other hand they may exist to the other extreme of complete obstruction with urinary retention. Most frequently congenital abnormalities represent a residue or remnants of changes in the maturation of the müllerian and wolffian ducts. It is felt by many that they play an important part in the disruption of involuntary urinary control. This was found in the Army where many young men were found with hypertrophy of the median bar, persistent albarran gland enlargement or hypertrophy of the verumontanum, and giving a history of frequency with nocturia and occasional nocturnal incontinence for years. In the conception of this faulty mechanism it must be remembered that the urethral tube and bladder neck are only open channels, as we know them in life, after the most complex and devious intergration and maturation of the embryonal components of sexual and urinary glandular structures. One can easily see how remnants of müllerian ducts or wolffian tubules may remain as aberrant structures, projecting into the urinary channel from the bladder outlet and producing an interference with normal urinary flow.

Infectious Disease as a Cause of Obstruction

Infectious processes producing changes and elevations at the bladder outlet are quite common. Since the institution of antibiotics and sulfonamide drugs, they are less frequent. They still exist, however, and actually too much reliance is being placed on the effect of such drugs, to the point that varying degrees of inflammatory elevation and obstruction may exist wthout adequate recognition of the part they play in urinary obstruction. The two most common sites of such abnormalities are in the prostate and in the seminal vesicles. When infection exists in these two structures, there is elevation of the posterior lip of the bladder outlet and derangement of the mechanism which affords adequate opening and free passage of urine from the bladder through the urethra. The initiation of urination is difficult and there is difficulty in maintaining the wide opening necessary for complete and free voiding, so that straining is necessary. Obviously, there are varying degrees of this abnormality from mild interference to sufficient obstruction to cause complete urinary retention. In this category also would fall posterior urethral strictures, which are rarely congenital, and are usually a residuum of a specific urethritis. Elevations of the seminal vesicles with interference in the mechanism of opening and closing the bladder outlet may also result from ligation or transection of the spermatic cords. The mechanism of this is obscure, but not infrequently a satisfactory transurethral electrosurgical procedure may be made less satisfactory by ligation of the spermatic cords and the resulting enlargements from the congestion of the seminal vesicles. Whether it is urogenic or whether the antigrade stimulus for emptying the vesicle is removed one cannot say. However, almost everyone who performs electrosurgical procedures and practices ligation of the spermatic cords as a prophylactic measure against epididymitis may experience this abnormality in his patients.

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Inherent Enlargement of the Prostate Gland Causing Obstruction

Of all the problems met with in obstruction to the bladder neck, the most frequent one to give trouble is benign hypertrophy. There may be diffuse quintolobar enlargement or the enlargement may simply be of posterior lobe or subcervical gland. Not infrequently one or the other of the lateral lobes may cause obstruction; rarely there may be enlargement of the anterior lobe alone. Often this latter abnormality exists after electrosurgical procedures which have adequately removed the lateral and posterior lobes but have not sufficiently dealt with the anterior lobe to prevent it falling into the outlet and causing obstruction.

It is interesting to consider the dimensional projection of the enlarging hypertrophied prostate. Enlargement occurs outward in an antero-lateral and posterior aspect; accompanying this there is inward tangential enlargement, and in addition to this there is an upward enlargement with projections of all the lobes into the bladder. It is likely that the superior projection is the most insidious and causes the most trouble in voiding. Not infrequently enlargement may be encountered in an outward and inward aspect as far as the lateral, anterior, and posterior lobes are concerned, without the patient experiencing much more urinary inconvenience than a slow, poor stream which requires an abnormally long period of time to pass. These latter symptoms seem to accompany and result more from the superior projections which occur as mounds encircling the urethra. As a result of this, residual urine is constant and the patient persistently feels the urgent desire to urinate. Another type of enlargement is that seen with subcervical glands which project into the urethra and which are seldom seen alone. They are often accompanied by enlargement of the lateral, anterior, and posterior lobes of the prostate.

Median bar enlargements are felt to be more of a congenital nature particularly if they incorporate the trigone. They are most frequently seen in young men, if they occur alone, and are considered by some investigators to represent the fifth lobe of the prostate. Before leaving this phase of the discussion, it is interesting to note that as the enlarging prostate projects upward within the bladder cavity there is distortion of the terminal ureters, often to such a point that they are pulled up with increased tension at the point where the spermatic cord crosses the ureter, resulting in partial obstruction and subsequent changes in the upper urinary tracts. It is possible that this mechanism may account for the frequent occurrence and loss of urinary reserve in people who present themselves with bladder neck obstruction resulting from enlargement of the prostate gland.

Obstruction Resulting from Neoplastic Changes

Of the neoplasms which occur in structures about the bladder neck, by far the most common is carcinoma of the prostate. You are, of course, familiar with the frequency of this disease in statistical balances of this day and time. The figures vary from a conservative 5 to 20 or 30 per cent. Some investigators say that of those who present themselves with abnormalities of the prostate gland, at least 30 per cent have cancer of the prostate. It is obvious that the involvement may be of any lobe of the prostate, but most frequently the posterior and lateral lobes are involved. It is believed by many that the tumor has its origin in the deep cervical glands of the prostate. In contradistinction to the enlargement from benign hypertrophy, carcinoma of the prostate does not project up into the bladder frequently. Rather there is an inward and outward enlargement resulting in encroachment on the urethra, and because of the nodulations and the irregularity of the enlargement the urethra becomes a tortuous channel. As the nodular, neoplastic prostate grows, the gland becomes comparatively avascular and accessory circulation becomes necessary. In addition, structures above and about the neoplastic nodules becomes compressed and undergo changes; perhaps the most noticeable one is that due to disruption of blood and lymphatic circulation. In the experience of numbers of patients, bilateral accumulation of varying amounts of fluid occurs in the scrotal sac. In those having symptoms of prostatism such fluid is suggestive that the lesion in the prostate is neoplastic. In fact, some surgeons have reached the point that when they observe fluid in both scrotal sacs in a patient with prostate disease they assume that carcinoma exists until proven otherwise. However, to find this without equally concrete evidence on rectal and cystoscopic examination of the prostate is indeed rare.

Another type of neoplastic degeneration causing obstruction at the bladder outlet is carcinoma of the bladder. All of us who practice this type of surgery have seen papillomata of varying size situated just on the rim of the bladder outlet.

There are other neoplasms which exist about the bladder neck but they are rare. Mesothelial tumors are found in children and especially in males. They probably represent degeneration of embryonal rests and various sarcomata and neoplastic degeneration of the so-called urethral valves are examples.

Traumatic Lesions Resulting in Obstruction

Interesting examples of obstruction following edema as the result of trauma were seen by many urological surgeons during the last war. Shell fragments not infrequently came to rest in the region of the bladder neck. As a case in point I recall my experience with one soldier. This boy was seen the day after D-Day; he could not pass his water. On examination a rifle bullet was found resting comfortably in his right scrotal sac. No point of entry could be detected in the scrotum. Close examination disclosed a point of entry through the external projection of the mucosa of the rectum; the bullet had then apparently passed through the prostate and had been deflected enough to pass through the perineum and down into the scrotum.

Another case is recalled. A young fellow stated that while taking a tub bath he was drinking a scotch and soda. He reached for his drink, which was sitting on the side of the bath tub, and as he did so his arm slipped on the soap, upsetting his drink, and the glass stirring rod which you can see flew into the air and went right into his urethra before he could stop it. In his haste to catch it, it passed on through the urethra and lodged at his bladder outlet causing such trauma that he was unable to pass urine. From these two accounts and others, which surgeons practicing in this field could relate, one can see that there may be many obstructions at the bladder outlet produced from without and inhibiting the passage of urine.

Calcareous Deposits Resulting in Obstructions

Stones in the posterior urethra and in the bladder are not nearly so common at the present time as they used to be. Nevertheless, not infrequently stones are encountered which lodge themselves in the posterior urethra. In addition it is not infrequent to discover stones incorporated within the body of the prostate. Surprisingly enough they almost invariably occur in small fibrotic glands and very probably they represent an effort on the body's part to overcome tuberculosis within the prostate. They are almost always multiple and almost always occur in the lateral and posterior lobes. They cause obstruction by producing nodular projections into the posterior urethra and by making the channel tortuous and smaller than is needed for the free passage of urine. Stones, in the bladder either in a cystocele or in a deep bas-fond, resulting in obstruction at the bladder neck possibly produce the obstruction in one of two ways, in addition to the existent cause for their production. They may drop forward and mechanically obstruct the outflow of urine through the already constricted urethra or by constant irritation of the bladder neck. They may produce such spasm that whatever opening there is does not open freely enough to emit even an abnormal flow of urine.

Obstructions from Abnormalities or Organic Changes in Structures Near the Bladder

Tumors of other organs such as fibroid of the uterus, or cancers of the ovary, or neoplasms of the rectum may result in such angulation of the bladder neck that adequate voiding may be difficult.

The Diagnosis

Here as in other phases of the practice of medicine a complete history and a satisfactory physical examination are necessary before anyone, be he specialist or otherwise, can approach the problem of bladder neck obstructions. For a urologist to immediately do a cystoscopy on a patient without a general physical examination is losing sight of the primary principle of specialization. It is generally felt in genito-urinary surgery that the urologist owes it to himself and especially to the patient that he thoroughly examine the patient from a general viewpoint. If such is done, it is almost a platitude to say that much will be learned regarding the frequently complex and related problems presented by other body-systems caused directly by abnormalities in the genito-urinary tract. Even though the referring doctor has just completed a thorough and complete general examination of his patient before he sends him to the urologist, it does not minimize the necessity of the urologist himself repeating the examination. It is felt that the referring physician expects this of the urologist, if the latter is to do the adequate service expected of him. The urologist thus will know how much the patient can stand and will direct his efforts to use those methods useful in gaining the most clear-cut findings.

Urologic Investigative Procedures

From a physical standpoint extremely important information can be gained from examination of the external genitalia and by digital rectal examination. Fluid in the scrotum, small nodulations of the epididymes, thickened spermatic cords, varicosities of the cords, variations in the shape, size, consistency and degree of tenderness of the structures, and the urethral excretions on pressure, will give important information relative to the status of the bladder neck. Obviously studies of the urine, prostato-vesicular discharge, scrotal fluid, etc., will yield additional information of great importance. Cystoscopy with direct visualization of the bladder neck is perhaps of greatest importance, because it not only tells the examining surgeon more about what is wrong, but it often helps greatly in prescribing the method of approach in correcting the trouble. X-ray studies either by retrograde or antigrade means yield additional information. Many enlarged prostates present themselves on the X-ray films as abnormal soft tissue shadows. The presence of stones can hardly be mistaken. The distortion and influence of the enlarging prostate and obstructed bladder neck on other systems, and most particularly on other portions of the urinary tract, are brought to light.

Biopsy is discouraging as a means for the accurate diagnosis of obstructions about the bladder neck. Obviously the advanced cancer of the prostate can be detected almost surely by indirect means,—that is, by the examining finger in the rectum and by cystoscopy with direct vision. However, there is a group of patients in whom suggestive findings of neoplasia of the prostate are so meager that radical surgery is not warranted. The serum acid phosphatase in these patients may be low or within normal limits.

One small nodule may be palpated rectally. The patient may be in the 50-year age group; he may have only symptoms of occasional nocturia. The grave and necessary question arises as to whether the patient has cancer of the prostate and whether he might be totally cured by radical surgery. Many surgeons attempt a biopsy of small nodules by inserting a biopsy instrument through the perineum guiding it up outside of the rectum by palpation with the finger into the prostate and hopefully into the nodule. Often this amounts to a major operation in itself and most frequently, except in the hands of a very few, yields poor results. Another way to obtain tissue for examination is to insert an electrotome and cut pieces out of the gland projecting into the urethra and into the bladder neck. These may be positive and show mitotic figures clearly enough to afford a positive diagnosis and permit the advice that extripation of the gland should be carried out. Most often, however, the fragments of tissue which are removed do not show neoplasia but show evidence of infection or benign hypertrophy. Because the small nodule which can be felt rectally is too deep and too flat within the gland to be removed with the electrotome, the resulting dilemma is perplexing and worrisome. The surgeon feels a natural hesitancy in discussing the matter with the patient because of his own doubt as to the diagnosis. Furthermore, the possibility of only an equivocal cure makes one hesitate in converting a vigorous, aggressive individual in his fifties into an asexual, vegetating, unambitious, dependent male by removal of the prostate. It is a matter for philosophic consideration. The urologist naturally asks himself, if he had the condition would he prefer to keep his small, slow growing nodule, have occasional attention given to his prostatism, and perhaps live just as long, or longer in a vigorous productive state. Suffice it to say that some, in contemplating the methods to be used in attacking this problem, have begun to use a less radical and a more conservative plan. If there is obstruction of a degree to remove it with the electrotome; if there is pain to treat the patient with female sex hormones and reserve orchiectomy for those patients who experience severe pain, metastasis or uncontrollable obstruction. The question of prostatic massage in treatment often involves a consideration of whether it is safe to massage a prostate which might probably harbor a cancerous nodule. There are many opinions concerning this. It is felt by some that massage of the prostate for reasons other than to obtain secretions for investigation is not a satisfactory method of treatment and might even be dangerous. On the other hand massage of the seminal vesicles which may relieve low back pain, testicular pain, and discomfort in the perineum and lower abdomen are probably warranted and yield good results.

The study of urinary sediment or prostatovesicular discharges for neoplastic cells has been advocated by some. Certainly it is of technical interest, but some pathologists will say that though they can ascertain the existence of cancer cells in the sediment, they cannot say from what site these cells arise. Consequently their detection and evaluation hardly amounts to much more than can be gained by the examining finger in the rectum. In the past several years a large number of slides of sediments and prostatovesicular discharges have been examined by a pathologist from proven cases of cancer of the prostate and only one has shown neoplastic cells.

Antigrade X-ray Studies in the Detection of Obstruction and Its Nature

The use of diodrast in urography has yielded the best results. It is almost reaction-proof, and in a number of studies only 15 cc. has been necessary to give the desired information in the properly prepared patient. In addition it affords data concerning the upper urinary tract and the character of the mid-urinary tract in relation to the degree of bladder neck obstruction.

Treatment

Obstruction About the Bladder Neck

Treatment for obstruction at the bladder neck is almost always manipulative. It will vary from the extreme of the simple passage of a filiform bougie to a total, radical perineal prostatectomy. Between these two extremes there are a great many treatments instrumental and medical that will tend to give relief by permitting the necessary flow of urine from the reservoir of the mid-urinary tract. In children the dilatation of constrictions of the bladder neck and the stretching of the urethral valves often produces surprising improvement in the control of urinary incontinence at night. However, electrosurgery of some obstructions of a congenital nature at the bladder neck in children may be necessary. Infections usually respond to the numerous drugs and antibiotics which good fortune has placed in our hands in recent years. All of them have their place and all have their advocates. About some we have become opinionated; we may often find that two individuals yielding the same culture will not respond alike to the same drug. Here it is well to remember that Nature, with the production of white blood cells, pyrexia and increased flow of blood, often does much more good than drugs. These protective forces may well be inhibited in their natural activity by the misuse of medicaments on the part of the surgeon. An abscess of the prostate may remain insidiously quiet with the use of antibiotics or sulfonamide drugs only to break out eventually and require surgery for proper drainage when the medication is decreased.

In the correction of benign hypertrophy of the prostate, the various surgical modalities have their place. In prepared and selected patients, transurethral electrosurgery, in the majority of cases, will produce lasting and satisfactory relief from the obstruction.

Before this epochal advance individuals with moderate abnormalities of the prostate were seldom operated upon. They were usually treated until their condition necessitated an open surgical approach either through the bladder or through the perineum to relieve the obstruction. However, in relation to transurethral electrosurgery, it is believed that more patients will be assured of a permanent result if they receive periodic treatment in the form of bladder neck dilatation for the first six months or year after operation. Following electrosurgery about the bladder neck, scar tissue frequently forms, and if it is not dilated the individual eventually has a recurrence of his obstruction, perhaps not at the site of the resected gland. Simple dilatation of this area before it has had time to develop such changes, resulting in avascular fibrosis, will enhance the possibilities of good operative results.

Prostatic Cancer

It has been shown that by the time the symptoms have developed sufficiently to warrant investigation for the possible existence of cancer, it has likely already penetrated the capsule of the prostate and has metasticized along the neural sheaths. If such is true, total and radical removal of the prostate gland would hardly produce results warranting such extensive surgery. To entirely remove the prostatic capsule and all of the surrounding tissue which might have received minimal, small, direct metastases would hardly leave the patient with anything through which to pass his urine. With such a procedure the problems of urinary control, complete asexuality, and the constant necessity of keeping the constricted channel open, adds additional weight for reservations in the use of such procedures. Probably the best results will be obtained by providing an adequate channel, when such becomes necessary, by electrosurgical means, and by controlling the growth of the gland and the effects of metastases by hormonal therapy. Many individuals, although usually seen in the older age group, are greatly improved if nothing more is done than to remove their testicles. However, immediately after this is done a few such individuals will have more obstruction. Perhaps this is true because of enlargement of the seminal vesicles which results from transection of the spermatic cords. This condition subsides, however, and after a reasonable period of time the patient can void more freely, and there are usually obvious changes in the prostate gland on examination. A few rare cases have been reported in which resected tissue, prior to removal of the testicles, showed mitotic figures and positive evidence of adenocarcinoma, and after removal of the testicles additional resected tissue failed to show any evidence of cancer.

Papillomatous lesions which may exist at the bladder neck, not arising from the prostate gland itself but from Albarran glands or perhaps from mucous glands, may also be treated by electrosurgical means, usually by simple desiccation of the base after the primary portion has been resected. Neoplastic lesions in little children at the bladder neck do not respond well to electrosurgical intervention, though there are cases on record of successful treatment of sarcomata of the bladder neck by electrosurgical intervention.

Traumatic Obstruction

Traumatic lesions producing obstruction of the bladder neck are best treated by removing the inserted foreign body if it exists, and diverting the urinary stream, on a temporary basis, thus providing for adequate control of the infection present if possible. The diversion of the urinary stream is believed to be best done by a suprapubic punch with the installation of a tube which allows the inflammation of urethra and bladder neck to become quiescent and affords better healing without the additional trauma of a urethral tube.

Calcareous Lesions

Calcareous lesions in the prostate and at the bladder neck offer interesting problems. If they are free within the urethral or bladder cavity they can be crushed, under direct vision, through the urethra and the particles removed with the evacuator. Occasionally they are too large for such removal and it is necessary to open the bladder either above or below. However, when such calcareous deposits exist within the body of the prostate the problems become more complex. They are persistently associated with a great degree of infection and it is believed that this infection is often tuberculous with secondary invaders such as organisms of the colon group. The surrounding glandular tissue is often avascular and fibrous. Attempts are frequently made to resect the obstructing portion or to uncover the stones and allow them to become free in the urethra so that they may be crushed and be made small enough to pass through the sheath of the rectoscope. However, following their removal healing is poor and control of the urinary stream is almost sure to be unsatisfactory. To make the problem still more difficult, men with such abnormalities usually have had such prolonged infection that renal efficiency is poor and the general health is correspondingly bad. The antibiotics help greatly, particularly streptomycin if the organism is of the colon group or if there is a tuberculous focus. Ofted diversion of the urinary stream suprapubically will advance the healing process.

Adjacent Tumors

The treatment of such conditions as tumors of the accessory genital structures such as pregnancy, uterine fibroids and tumors of the rectum often present complicated problems. Whether or not a pregnant woman must have diversion of the urinary stream for sufficient time until her pregnant uterus has arisen out of the pelvis and ceases to produce angulation and obstruction is a matter of grave concern. Tumors of the rectum are surgical problems. After they are dealt with by the necessary surgical means, obstruction to the bladder neck no longer exists but almost in every instance complete incontinence ensues. The consensus of opinion is that the necessary radical surgery with abdominal perineal resection for cancer of the rectum must of a necessity interfere with sympathetic control to the bladder neck and result in denervation of the internal sphincter.

Summary

This rather rambling paper has dealt with problems of obstruction about the bladder neck. The most frequent problems encountered have been divided into seven categories, all of which have been separately discussed as to their nature. Various methods which can be used in the diagnosis of such abnormalities have also been discussed. The method of treatment in each instance has been considered and an effort has been made to advance the various accepted methods of treatment and considered opinions on the subject. X-ray findings have been shown in an effort to afford some clarification of the various conditions which have been discussed and their treatment.

Discussion

M. K. MOULDER, M.D. (Nashville): Members and Guests.

Dr. Dougherty's thorough coverage of this subject leaves little more to be said. I would like to stress the fact, however, that vesical neck obstruction occurs in the male and the female of all ages. We see vesical neck bars in infants as well as in the middle-aged and older groups. Typically they will have repeated bouts of urosepsis, residual urine and bladder trabeculations. Any child with more than one attack of pyelitis should be investigated with particular study of vesical neck. Response sometimes is amazing to simple urethral dilation or vesical neck resection.

Likewise, in younger men bar formation or middle lobe hypertrophy is commoner than most of us realize. We have all seen the patients with chronic prostatitis. Some actually will develop a neurosis because of continued perineal pain. If these men do not get much better with a minimal amount of local treatment a urological survey should be done. In a surprising number obstruction of the vesical neck can be demonstrated with cellules, trabeculations, etc. These men will never get completely well unless the obstruction is relieved.

I have enjoyed this comprehensive paper by Dr. Dougherty and want to thank him for bringing this subject again to our attention.

A Study of the Association of Factors of Pregnancy and Parturition with the Development of Cerebral Palsy: A Preliminary Report, Lilienfeld, A. M., & Parkhurst, E., Am. J. Hyg., 53:262, 1951.

This preliminary report is based on a group of 561 children with cerebral palsy who were born during the period 1940-1947. The cases were obtained from the case index utilized in the Medical Rehabilitation (Crippled Children's) Program of the New York State Department of Health. The birth certificates of these cases were obtained from the routinely reported vital statistics records. Of a total of 735 cases found in the index, 581 birth certificates were located. Of these 581 cases, 20 (3.4%) were a result of a multiple pregnancy and 561 a single birth. This report is concerned with the single birth group, since the number of multiple births was so small. In passing, however, mention should be made of the fact that the percentage of multiples births in this group (3.4%) is higher than in the general population (2.1%).

The distribution of various factors of pregnancy and parturition among these cerebral palsy cases was compared with the total population of births from which these cases were derived.

During this period the questions regarding complications were completed on approximately 90% of total birth certificates. Ninety-two per cent of the certificates of the cerebral palsy cases had these questions completed. The percentage of birth certificates with reported total complications among the cerebral palsy cases was 37.8% in the population. Examination of the table of complications indicates that the percentage of each complication in the cerebral palsy group is higher than in the surviving live birth group.

It seems indicated from this comparison that infants exposed to these complications during pregnancy and delivery have an increased risk of developing cerebral palsy. There is, however, a large group of infants and children with cerebral palsy (62.2%) who have not been exposed to these complications. Also, approximately 18% of cerebral palsy cases are associated with postnatal causes and Rh incompatibility. In addition, there probably exists some under-reporting of diagnosed complications and even of missed diagnoses of complications. Hereditary factors must also be seriously considered as playing a possible role.

With regard to specific complications, the data suggest that those complications which resulted in higher combined infant loss rates also had a higher degree of association with the development of cerebral palsy. In addition, those complications which are more commonly associated with fetal anoxia had a higher degree of association than those more prone to produce mechanical birth trauma. In general, the various complications which show a greater degree of association with infant loss are also more likely to be associated with the development of cerebral palsy.

The relationship of various obstetrical operative procedures to cerebral palsy was not borne out by the present data after the association of complications with operative procedures was taken into consideration.

It appears that there is an association of prematurity with the development of cerebral palsy, and that this is independent of whether or not prematurity is the result of a complication of pregnancy and parturition. The data also suggest that addition of such a complication to a premature infant who has cerebral palsy increases his probability of dying during the early years of life.

The maternal age-birth order of distribution among the cerebral palsy cases was suggestive of the existence of the same U-shaped distribution that prevails among combined infant loss. Increased validity was added to this observation by evidence from other sources.

The mothers of the children with cerebral palsy had approximately 35% more infant loss in pregnancies previous to the birth of the cerebral palsy cases than in the population in general.

There appears to exist a relationship between stillbirths, neonatal deaths and cerebral palsy. The pattern of factors, such as complications of pregnancy, prematurity, etc., which influence infant loss seems to behave in a similar manner with regard to cerebral palsy. On the basis of these related patterns, it is possible to broaden the concept of "reproductive wastage" to include cerebral palsy and possibly other related disorders. One

(Continued on Page 249)

STAFF CONFERENCE

Department of Medicine, University of Tennessee College of Medicine*

DR. T. N. STERN: Our patient today will be presented by Dr. Iris Pearce.

DR. IRIS PEARCE: The case for presentation is that of a 48-year-old colored male. On April 7, 1952, he came to the Out-Patient Department complaining of cough productive of small bloody specks, fever, chills, weakness and anoxeria of ten days' duration. He was placed on sulfadiazine and symptomatic therapy. He did not respond and was admitted to the John Gaston Hospital on April 10, 1952. There was no history of night sweats. Occasional episodes of belching with acid eructation had been present. Stools varied from white to brown in color. Nocturia had occurred three to four times for several years.

At the age of 13 he injured his right hand which, in his opinion, gave rise to the deformity to be described later. Nodules had been present in the skin throughout life. He had been seen first in the Out-Patient Department March 9, 1950, and was admitted to the John Gaston Hospital on that date with a pruritic, intermittent jaundice of about three months' duration, hepatomegaly and anemia. The clinical impression of obstructive jaundice was confirmed by laboratory findings. Two liver punch biopsies were reported as compatible with obstructive jaundice. Biopsy of one of the skin lesions was reported as compatible with xanthofibroma of the type seen in neurofibromatosis. Bone marrow aspiration was not diagnostic. On March 28, 1950, rupture of a right hypopyon necessitated ophthalmic surgery. On April 12, 1950, the abdomen was opened and the liver found to be swollen and gallbladder dilated, both being adherent to the diaphragm. The pancreas was normal. In the region of the ampulla of Vater there was an irregular, hardened mass 1.0 cm. in diameter that involved the wall of the duodenum. The common bile duct was anastomosed to the duodenum. No biopsy was taken. An exploratory laparotomy was performed on May 11, 1950, for a possible Whipple procedure. This was not done due to technical difficulties. No metastases were found. He was discharged from the hospital on May 27, 1950.

During 1951 the patient visited the Out-Patient Department at intervals of approximately one month with complaints of neck pain and abdominal discomfort. X-ray examinations showed hypertrophic changes in the cervical spine. The liver was palpable 3 cm. below the right costal margin.

The patient's mother had had skin nodules similar to the patient's. She expired at the age of 50 of unknown cause.

Admission physical examination disclosed a well-developed, well-nourished, colored male in moderate respiratory distress with a blood pressure of 118/76, respiration 24 per minute, pulse 98 per minute, temperature 102 F. The positive findings were as follows: corneal opacity of the right eye; carious teeth; gingivitis; palpable cervical nodes; trachea in mid-line; shallow respiratory excursions; dullness, decreased breath sounds, fine crackling moist rales in the anterior right upper chest; liver palpable 5 cm. below the right costal margin, non-tender, smooth; pseudoarthrosis of the right hand involving the two lateral metacarpals; tendency to spoon-shaped nails; generalized multiple, pedunculated and flat, painless, fatty-type tumors, .25-2.5 cm. in diameter; cafe-au-lait areas on the anterior chest and abdomen. Laboratory findings included: leucocytosis with a slight shift to the left; hematocrit of 43 vol. %, ESR 1.3 mm. per min.; urinary specific gravity of 1.022, with negative chemical and microscopic findings; gram positive cocci and rods, gram negative rods, no acid fast organisms in sputum.

A therapeutic regimen of aureomycin 250 mg. four times a day and symptomatic therapy was instituted. A daily afternoon fever of 102.6 F. for three days with a return to normal in the late evening was recorded. A gradual regression of fever followed.

On April 16, 1952, the patient was mildly uncomfortable, weak and anorexic. In the right upper lung field there were increased fremitus, decreased breath sounds and dullness. Respirations were shallow and equal. There was no cardiac enlargement; rhythm was regular; no murmurs were heard. A PPD No. 2 skin test showed an area of induration 3 cm. in diameter after 48 hours.

On April 17, 1952, the sputum culture was reported positive for streptococcus viridins.

On April 18, 1952, there was slight hemoptysis, and the afternoon temperature was 99 F. Serum protein was reported in Gm. per 100 ml. as total 7.9, albumin 3.4 and globulin 4.5.

On April 19, 1952, bronchoscopy was performed with confirmation of right upper lobe consolidation. Biopsies were taken from the right bronchus. At 2:00 p.m. the patient's condition was good, respirations 18 per minute, pulse 96 per minute. In the right upper lung field breath sounds were decreased and dullness was demonstrated. Blood culture was reported positive for gram positive cocci and penicillin 300,000 units every four hours was ordered. Bromsulfalein retention 45 minutes after the intravenous administration of 5 mg. per kilogram body weight was 36 per cent. At 4:00 p.m. the temperature was 102 F. At 6:15 p.m. about 60 ml. of bright red frothy sputum was expectorated, and the blood pressure was 130/100 with a pulse of 130 per minute. Basal oxygen and suction were ordered. At

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7:30 p.m. the blood pressure was unobtainable, the patient was sweating profusely, and coarse bubbling rales were heard throughout both lung fields. Bronchoscopy did not reveal an area of hemorrhage; the bronchi were clear. The electrocardiogram was reported as consistent with myocardial abnormality. At 8:25 p.m. no vital signs were present. The patient was discharged to the morgue on the ninth hospital day.

DR. STERN: Dr. Carroll, will you interpret the X-ray films for us?

DR. D. S. CARROLL: We have quite a few X-ray examinations on this patient. The first film of the chest we have was made on March 10, 1950, and at that time the heart was not enlarged and the lung fields were entirely clear. The next examination was on April 7, 1952. At that time there was a fairly extensive area of consolidation in the superior portion of the right lung field with the appearance of a mass in the right hilar area. Films made on April 11, 1952, show an extension of the consolidation on the right to involve the entire right upper lobe. There still appears to be a mass in the right hilum; and although it may be infiltrative, certainly bronchogenic carcinoma must still be considered, and there is sufficient evidence on the films to warrant a bronchoscopic examination.

Several upper gastro-intestinal examinations were done, and the one demonstrated is of significance in that it shows a fistula between the common bile duct and the duodenum. The barium has left the gastro-intestinal tract and has filled all of the major bile ducts and the gallbladder. No intrinsic pathology was noted in the gastro-intestinal tract.

A barium enema showed no abnormality in the colon.

X-ray examination of the skull was negative, but examination of the paranasal sinuses showed a mild maxillary sinusitis.

A review of the skeletal system shows only a few osseous lesions which can be attributed to neurofibromatosis. One is a lesion on the inferior aspect of the descending ramus of the pubis and ischial tuberosity on the right side. The lesion has the appearance of a pressure defect, in that the bone is destroyed subperiosteally to produce a saucer-shaped defect.

Examination of the hand reveals pseudarthrosis of the fourth and fifth right metacarpals.

DR. STERN: Dr. W. E. French, of the Surgical Service, saw this patient in consultation. Dr. French, will you give your thoughts concerning him?

DR. W. E. FRENCH: This patient was transferred to the Surgical Service with a presumptive diagnosis of carcinoma of the pancreas and generalized neurofibromatosis. His jaundice was of a painless progressive nature, and we felt reasonably sure of our preoperative diagnosis. We were aware of the fact that other lesions may produce a painless jaundice, however.

He was prepared for surgery with the thought in mind of doing only a cholecystojejunostomy because of the poor prognosis of the Whipple procedure for carcinoma of the head of the pancreas. At the original surgical procedure, which was accompanied by uncontrollable generalized oozing of blood, a small lesion measuring approximately 1 cm. in diameter was found in the region of the ampulla of Vater. His common duct was fully 1 inch in diameter. The question then was as it is today. Was the lesion a stone, a carcinoma of the ampulla or lower common duct or a neurofibromatous lesion in the region of the ampulla? We opened the enlarged common duct adjacent to the duodenum in an attempt to differentiate the possibilities while realizing the frequency of cholodochal fistulas in those common ducts that are drained where malignancies are present. This was selected purposely to do an anastomosis to the duodenum if necessary. No stone could be found. We felt then that we were dealing with a carcinoma of the ampulla of Vater. Because of the profound bleeding we felt that the patient would not tolerate a pancreato-duodenectomy in one stage. Therefore, we decided to do a cholodocho-duodenostomy as a first stage of a Whipple procedure. Jaundice rapidly subsided following surgery.

Some three weeks later, I had the pleasure of assisting Dr. Harwell Wilson, the Chief of the Surgical Department, in the exploration of this man, with the thought in mind of doing a pancreato-duodenectomy. Because of the extensive, dense adhesions that made identification of the biliary radicles impossible, we discontinued the operation. Again, the postoperative course was uneventful.

Since the last surgical procedure, almost two years have elapsed. We are aware of the fact that the overwhelming majority of carcinomas of the ampulla of Vater or lower peri-ampullary region that are not resected kill the patient within two years. Therefore, we feel that this patient did not have a carcinoma of the ampulla, but either had a silent stone that we have missed or that the lesion is a visceral manifestation of von Recklinghausen's disease.

DR. STERN: Dr. Roberts will continue the discussion of this interesting case.

DR. R. H. ROBERTS: To summarize briefly the events leading up to the present, we are faced with the problem of an undiagnosed pulmonary disease in a 47-year-old colored male. Prior to this, he experienced an obvious obstructive type jaundice, and was treated surgically by by-passing an ampullary lesion considered at the time to be malignant. It was also reported that he had von Recklinghausen's neurofibromatosis in 1950, when he was jaundiced. Corneal ulceration was an incidental finding at that time.

To proceed chronologically, let us consider first the obstructive jaundice. At the time of his surgery, there was a small lesion of either the duodenal wall close to the ampulla of Vater, or a lesion of the ampulla per se. At any rate, the lesion was adequate to block the biliary flow at that point. Since the nodule was firm on palpation, it could have been a calculus or a malignancy. In view of the time elapsed since surgery, however, I feel that had malignancy been present it should have caused the patient's death before now, as Dr. French pointed out. Although the patient did expire prior to this seminar, it is felt that a pulmonary disease was the immediate cause of death. Of course, a stone could have long since been passed into the duodenum, or could have remained in situ. There is a very interesting thought to be entertained at this point. The patient had subcutaneous nodules proven at biopsy to be neurofibromata. Generically, there are two types of this tumor. One is a rare type which involves chiefly the sympathetic nerves, and is composed of true nervous tissue. The other is composed of nerve sheath elements and may involve any nerves in the body. Pathologists designate several subtypes of the latter. In recent years, evidence has been accumulated that neurofibromatosis is associated at times with malignancies. Davis et al.,[1] in 1950, reported also a case of neurofibromatosis associated with pheochromocytoma, and pointed out that his was the tenth such case in the literature. An interesting article several months[2] ago reported two such cases of gastro-intestinal hemorrhage with ulcer-like symptoms; these proved to be due to intestinal neurofibromas. In one case, the jejunum only was involved, and in the other the lesions were scattered throughtout the small intestine. Bockus,[3] in his text, reported only nine cases of intestinal neurofibromatosis up to 1944, but admitted that many had probably been overlooked. Neurofibromatosis is a rather peculiar disease. There is an apparent familial tendency, but siblings may have patchy pigmentation of the skin instead of nodules and, indeed, one of the cases mentioned above which suffered from gastrointestinal hemorrhage had just such pigmentation without nodules. Neurofibromatosis may be related to many neurocutaneous disorders. Incidentally, in a series of 82 retrorectal tumors,[4] 12, or 15 per cent, were neurogenic tumors. To get back to the case at hand, the time element certainly favors the intestinal lesion at the ampulla being a neurofibroma rather than malignancy, and I believe that is what this patient had.

Let us turn now to the pulmonary disease. It would wrap up the case nicely if it too was a neurofibroma. Certainly neurofibromas are found in the chest, but several factors are against this theory in this particular patient. For one thing intrathoracic neurofibromas are nearly always in the upper posterior mediastinum. This density was in the right hilar and mid-lung field. Neurofibromas are slow growing tumors; this was apparently a fairly rapidly growing lesion if it was a tumor at all. The chest film taken in 1950 was reported negative. Most intrathoracic neurofibromas, as I understand it, are actually extrapleural, and arise from the spinal nerves. However, it is not inconceivable that a neurogenic tumor could be located elsewhere in the chest. If it were that type of tumor, I would lean more toward a neurofibrosarcoma, i.e., a malignant neurogenic tumor. Tubercle bacilli were not found in the sputum. No mention was made of studies for fungi. Streptococcus viridans was found on at least one occasion. This organism is sometimes seen as secondary invader following influenza and other respiratory infections, but is not common. However, it is found in the mouth and sinus flora frequently. My impression from the location of the lesion and the clinical picture in general is that the lung pathology is due to a malignancy with resultant obstructive bronchiolitis. And the most likely diagnosis statistically is bronchogenic carcinoma. The laboratory findings on the last admission confirm the fact that the patient had irreversible liver damage from his previous obstructive jaundice.

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[1] Davis, F. W., Hull, J. G., Vardell, J. C.: Neurofibromatosis and Pheochromocytoma, Amer. J. Med., 8:131, 1950.

[2] Kleitsch, W. P., Kehne, J. H., & Gutch, C. F.: Gastrointestinal Hemorrhage Due to Neurofibromatosis, J.A.M.A., 147:1434, 1951.

[3] Bockus, H. L.: Gastroenterology, W. B. Saunders Co., Philadelphia, 1944, Vol. II, p. 130.

[4] Jockman, R. L., Clark, L. P., Smith, N. D.: Retrorectal Tumors, J.A.M.A., 145:956, 1951.

In summary, I would diagnose this case as (1) von Recklinghausen's neurofibromatosis involving the skin and the duodenum, with resultant obstructive jaundice; (2) probable bronchogenic carcinoma of the right lung.

DR. A. B. WEIR: I think it is interesting that a few years ago we had a patient in this hospital who had generalized neurofibromatosis and multiple myeloma. In addition he developed jaundice consequent to obstruction of the common duct by a tumor in the duodenum. I am not certain what kind of tumor it proved to be on histological examination.

DR. J. WARREN KYLE: I am glad Dr. Weir brought up this case. The tumor in the duodenum proved to be a carcinoid.

That patient was virtually a museum of pathology. He had subcutaneous neurofibromas, cafe au lait spots, bone cysts and a pseudarthrosis of the tibia due to neurofibromatosis. In addition, he developed the punched-out bone lesions of multiple myeloma. A biopsy of one of the neurofibromas had been interpreted as showing sarcomatous change. Finally, he had the duodenal carcinoid already mentioned. A recent article[5] brought out the hypothesis that neurofibromatosis is but one manifestation of an inherited intrinsic defect which may predispose an individual to a wide variety of lesions. In addition to skin pigmentation and bone lesions, this may include several types of tumors related to neurofibromas histologically. It would seem that our recent experience here goes along with this hypothesis, and even further so far as associated tumors are concerned.

DR. STERN: This patient expired a few days ago. The pathologists are prepared to report their findings. Mr. C. D. Scruggs will present the gross findings.

MR. SCRUGGS: The external appearance of this 47-year-old colored male was remarkable in that his upper extremities and anterior chest wall were covered with neurofibromas which measured from a few mm. to 1 cm. in diameter.

The spleen was large and soft, and in its center a firmer 1 cm. mass was found. There was a 0.5 cm. well encapsulated mass in the prostate.

Extensive fibrous adhesions were present throughout the peritoneal cavity, particularly in the area of the duodenum and gallbladder. The gallbladder was completely adherent to the inferior surface of the liver. There was a 1 cm. sized mass covered by the mucosa in the common duct near its junction with the duodenum. Proximal to this mass the common duct was dilated to the extent that at first it was mistaken for the gallbladder. It also was adherent to the gallbladder as well as to the liver. This dilated common duct measured approximately 5 x 2 cm. and was filled with a green viscid bile.

In the retroperitoneal space over the aorta and just superior to the level of the left renal artery an ovoid mass was found measuring approximately 3 x 3 cm. which was connected to all surrounding structures by fibrous adhesions. Its cut surface was grayish-white with several areas of hemorrhage. It was moderately firm in consistency.

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[5] Inglis, K.: Nature of Neurofibromatosis and Related Lesions, J. Path. & Bact., 63:519, 1950.

The right lung was very heavy, weighing 1,450 grams and was covered completely with fibrous and fibrinous adhesions. The middle and lower lobes appeared yellow on the surface, while the upper was more hyperemic. The cut surface of the right lung showed a sanguinopurulent exudate and some of the larger arteries were thrombosed. The parenchyma was very soft, almost necrotic in some areas and semifluid. The left lung was heavier than normal weighing 740 grams but the consolidation was posteriorly and resembled bronchopneumonia more than the suppurative condition which existed in the right lung. The adjacent lymph nodes were small and pigmented.

DR. STERN: Dr. J. K. Frenkel will continue with a discussion of the microscopic findings.

DR. FRENKEL: The important microscopic findings concern tumors in the skin, prostate gland, bile duct, retroperitoneum and spleen, as well as lesions of the lung.

A skin nodule shows the typical findings seen in a neurofibroma: an unencapsulated proliferation of Schwannian cells, infiltrating the surrounding connective tissue. In this case neurites were generally absent. Little pigment was present. Some fairly intact sweat glands lay embedded in the firmly vascular neurofibromatous tumor. Even though infiltrating, this tumor is benign. Probably much less than 10 per cent of patients with von Reckinghausen's disease develop the counterpart, malignant Schwannoma. However, it should be stated that about one-half of the latter arise in patients with von Recklinghausen's disease.

The retroperitoneal tumor is encapsulated and composed of groups of fairly regular cells, somewhat resembling adrenal-medullary cells, but without chromaffin pigment. The cell groups are embedded in a thin connective tissue framework. This tumor is very vascular with large sinusoidal blood-filled spaces adjacent to the tumor cells. Some of the latter even seem to be inside these vessels. In spite of this feature, this tumor is considered to be a benign paraganglionoma. No metastases were found. Paraganglionomas occur along the sympathetic or parasympathetic chains. In this case the tumor may have arisen from a retroperitoneal, probably sympathetic, ganglion. It is analogous to a pheochromocytoma arising from the adrenal medulla, only that our tumor did not contain chromaffin pigment, and was not functional in a sympathomimetic direction; no attacks of paroxysmal hypertension were observed. Whether the occurrence together of neurofibromatosis and our paraganglioma is significant, I cannot say. They have not been recorded as occurring together frequently.

The ovoid tumor in the prostate gland measuring about 1 x 1 x 2 cm. in diameter was thought on gross examination to be a neurofibroma. However, sections showed it to consist mainly of smooth muscle bundles accompanied by very little connective tissue. Hence we are dealing with a benign leiomyoma. Here as well as elsewhere in this patient, the smooth muscle fibers are often swollen and appear granular, leading to bulbous enlargement of the cell. I doubt that this is primarily due to postmortem degeneration, since it does not usually appear until much later. I believe that this may represent some form of muscle degeneration, present during the patient's lifetime. A bronchial biopsy showed the same myofibrillar swelling. Leiomyomas of the prostate gland are fairly rare, and they are usually regarded as arising in conjunction with fibromuscular hyperplasia which, however, was not prominent here.

In the wall of the common bile duct near the duodenum is a tumor projecting into the lumen and producing dilatation proximal to it. This tumor is composed of infolding glands of gallbladder epithelium, dissecting in between the smooth muscle bundles of the wall and accompanied by desmoplastic reaction. This is an adrenocarcinoma of the common duct. Perineural and probably also lymphatic invasion are present, but no gross metastases were observed. However, no detailed examination of the regional lymph nodes for metastases was undertaken since the lesion was grossly thought to be a neurofibroma. We recall that this patient had an attack of biliary obstruction two years prior to his death. At that time the patient was explored surgically and a tumor mass was found in this region. It was, however, not biopsied. The common duct was transplanted to another site in the duodenum. I do not know whether we are dealing with the same tumor here. More likely, the paraganglionoma was to blame, since it was in the area where the ampulla of Vater might have been. The jaundice subsided after transplantation of the common duct. Recently, jaundice recurred, apparently due to obstruction from the carcinoma.

A fifth tumor was present in the spleen, in the form of a small sclerosing hemangioma about 1 cm. in diameter.

None of these tumors, even though one was a carcinoma, contributed significantly to the patient's death. He died with marked respiratory embarrassment and at autopsy pneumonia was found in all lobes. As Mr. Scruggs told you, the right lobe presented a picture of suppurative pneumonitis. In the consolidated areas a fibrinous exudate was present, containing about two-thirds mononuclear cells and one-third neutrophile granulocytes. The alveolar linings were generally intact. There were neither circumscribed granulomas nor necrosis, Throughout these inflammed alveoli occurred many double-contoured, non-endosporulating but budding fungi, morphologically resembling *Blastomyces.* From lung tissue obtained at autopsy, Miss Larey Evans cultured *Blastomyces dermatitidis* which was morphologically typical. They appeared as fluffy white growths on Sabouraud's medium incubated at room temperature. No lesion of blastomycosis were found outside of the lung.

The mixed mono- and polymorphonuclear exudate, and the absence of localization, of epitheloid or giant cells indicate an infection of relatively recent standing. It is possible that a primary focus existed in the lung from which the infection spread by aspiration. Many of the bronchi were filled with mucopurulent exudate containing numerous yeast forms of *Blastomyces.* It is doubtful that treatment with aureomycin and 2-hydroxystilbamidine could have saved the patient at the time of his entry to the hospital.

In summary, we have a patient with generalized neurofibromatosis, with a retroperitoneal paraganglioma, an adenocarcinoma of the common bile duct, a leiomyoma of the prostate gland and a sclerosing hemangioma of the spleen, who finally died from pneumonia due to *Blastomyces.*

(Continued from Page 243)

might postulate the existence of a "continuum of reproductive wastage" which can be subdivided into lethal and sublethal manifestations. The lethal component includes abortions, stillbirths and neonatal deaths. The sublethal component includes cerebral palsy and, possibly, other disabilities.

Although this concept has never been stated as such, it has been implied previously by those investigators who have emphasized the role of cerebral hemorrhage in the etiology of cerebral palsy. It has also been implied by Ingalls and Gordon in their epidemiological investigations of such conditions as mongolism and is probably equivalent to their concept of disease described as the "biological gradient of disease." (Abstracted by Milton Smith Lewis, M.D., Nashville.)

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The President's Page

WE MUST HELP THE AMERICAN WORKER

Dr. Smith

"Although I may disagree with what you have to say, I will die fighting for your right to say it."—Voltaire.

In my inaugural address in Knoxville, I stated a firm belief that we should begin a series of meetings with labor, and with management, in an effort to understand, and solve, the health and medical care problems of the American worker.

The Memphis and Shelby County Medical Society has conducted such a special meeting. And they did it extremely well. It was a stimulating, effective full society session, held on the evening of May 27. I want to quote here, for your consideration, certain remarks which the speakers on the panel sincerely believed to be constructive criticism.

Frank Miles, President of the Memphis Trade and Labor Council, A. F. of L.:

"I think that doctors, through the media of such meetings as this, can better understand the problems facing them. I believe that if doctors can better understand health programs we are trying to initiate within our unions, we will solve the problem of relief from the burden of medical care cost. I believe that we are trying, also, to meet your problems. And we are not asking the government to do it either.

"I think our movement has been the bulwark against Communism in this country, whether a lot of people agree with me or not. Communism thrives on dire want, starvation, death. . . . We believe that you should be entitled to a fair wage the same as our people."

Lucius Burch, Memphis attorney, son and brother of Tennessee physicians:

"I don't think you fellows are nearly scared enough about socialized medicine. I think it is much more a threat than even you think.

"And be worried about this, too. There isn't any instance, where you have had socialism, that the people have ever backed up from it.

"For some reason which doctors know better than anybody else, doctors won't get out into the rough and tumble of ordinary life. They won't take part in political affairs."

Frank Ahlgren, Editor of The Commercial-Appeal:

"Doctors defeat their own purpose when they withhold, or make it difficult, to get a story that will tell the public of the strides medicine has made, and is making, for the benefit of public health."

Leo E. Brown, Public Relations Director of AMA:

"We feel that it is the responsibility of the physician, when he is discussing his prognosis, to explain in detail the various costs of medical care. . . . Mr. Burch mentioned a very important item when he said physicians are blamed for the *entire* cost of medical care."

P.S.: We are happy to report to you that the Wage Stabilization Board ruling which stopped expansion of The Tennessee Plan of health insurance has been relaxed, thanks to the efforts of individual physicians and members of the Tennessee Congressional delegation, especially Representative Percy Priest.

Daugh W. Smith

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JUNE, 1952

EDITORIAL

THE PLACE OF RADIOACTIVE ISOTOPES IN MEDICINE

Not only is the medical literature including more and more contributions on the use of radioactive isotopes in the science and practice of medicine, but the lay press also is educating the public, accurately or otherwise, on their use in modern medicine. The physician not having had the opportunity to observe the use of these substances is often confused by the whole subject, because it not only is foreign to his armamentarium but also because of the specialized phraseology used in the discussions. The use of the radioactive isotopes has become widespread only since 1946 when these substances were made available by the Oak Ridge National Laboratory. Physicians are being questioned, and will be more so in the future, by their patients relative to these matters. Some elemental knowledge is therefore necessary.*

Radioactive isotopes are usually used as simple ions which differ from non-radioactive elements only in the presence of an extra neutron in the atomic nucleus. (The radioactive isotope is made by bombarding the element by neutrons in a nuclear-reacting pile or cyclotron.) In general it appears that the extra neutron does not alter the element insofar as biologic reactions are concerned, thus permitting its incorporation into the tissues of the living organism. Because of the changes in the nucleus of the atom, disintegration may occur suddenly in less than a second or so slowly as to need millions of years. The time needed for disintegration of half the atoms is defined as the isotope's "half-life." Obviously, an element of a short half-life may be safe for clinical use. The use of a long half-life isotope means that radioactive material is stored in the body for longer periods, thus subjecting the body to the hazards of prolonged irradiation. Selective localization of radioactive material also determines dangerous effects. Years ago it was learned in industry how hazardous was the selective localization of radium in bone, with resultant fatal necrosis. (This occurred in the workers who pointed their brushes with their lips in the act of painting luminous watch dials.) If the isotope is more widely distributed in the body, such local effects of irradiation are diminished through dilution. Upon disintegration of the radioactive isotope emanations of the beta, gamma, alpha and neutron types occur.—these of course represent the dangers of radioactive material or, when used therapeutically, are directed to the control of neoplastic disease. The gamma emanations are like X-rays. The beta particles are electrons effective mainly in the immediate region of their disintegration.

Much is still to be learned of the long-term results of irradiation. Though as much as 5,000 r may be used locally in the X-ray therapy of a skin cancer, it is estimated that 400 r applied in total irradiation of the body would be fatal. The body receives 20 to 40 r in total irradiation by cosmic rays in a 70-year lifespan. A gastro-intestinal series subjects the patient to about 40 to 75 r. The hazard of isotopes lies in their ingestion or inhalation to add more to the body in terms of continued irradiation after storage in tissues. This is the reason for the restrictions imposed by the Atomic Energy Commission on the use of radioactive isotopes. Only those with training in the hazards and their control are permitted to receive isotopes for experimental and clinical use. Several methods are available to measure the emanations, the one best known to the reading public as the Geiger counter.

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*Kelsey, F. E.: Radioactive Isotopes in Medical Research, Diagnoses and Therapy (Report of Council on Pharmacy and Chemistry), J.A.M.A. 146: 1131, 1951.

Therapeutically speaking several radioactive isotopes have found a place in clinical medicine for the moment at least. Radioactive phosphorous being more highly concentrated in bones, bone marrow, liver, spleen and lymph nodes may be used to induce remissions of up to a year in polycythemia rubra vera. It also reaches higher concentrations in neoplastic tissues, though not in therapeutic levels, thereby permitting diagnostic localization with a Geiger counter. Phosphorus 32 has a half-life of 14 days; 20 to 40 per cent of the absorbed element is rapidly excreted through the kidneys. Of oral doses, 75 per cent is absorbed the rest being excreted in the feces. Radioactive iodine, with a half-life of 8 days, is especially of value in relationship to activity of the thyroid gland. It is used orally, is rapidly absorbed, and normally 10 to 25 per cent is fixed in the thyroid gland. In hyperthyroidism 50 to 80 per cent may be found in the gland (by Geiger counter) and in myxedema less than 10 per cent. Because of the localization of iodine 131 in thyroid tissue, it may be used diagnostically as already implied, and in localizing metastases of thyroid cancer. Therapeutically it may be used as a source of irradiation in toxic thyroid states and in some instances of metastatic disease in the patient having a carcinoma of the thyroid. Radioactive gold, gold 198 and 199, emitting both beta and gamma rays and being injectable in a colloid form into a tumor mass, where 99 per cent is fixed, may be used for local irradiation. Its half-life is from 2 to 3 days and thus is effective for several weeks. Radioactive cobalt is being used for its gamma rays instead of radium.

The radioactive isotopes are used even more in basic studies having to do with normal physiologic processes as well as with pathologic ones. The use of I_{131} in the study of thyroid function has been implied Sodium 24 being rapidly diffused, and with a half-life of about 15 hours, is being used as a means of studying circulatory dynamics, extracellular fluid, and the efficiency of the peripheral circulation. Carbon 14 is proving to be a most interesting and valuable experimental tool. Having a half-life of 5,600 years it would remain for life in the tissues of the body with irradiation of body tissues. However, since carbon is basic to all organic compounds, carbon 14 permits the study of basic chemical and physiologic processes. For example, radioactive plants may be grown by supplying them with carbon 14. The radioactive derivatives, such as digitoxin, morphine, atropine and numerous others, are being studied in experimental animals. By the incorporation of carbon 14 in the food, aminal tissues may be made radioactive. Thus the essential elements in the body economy may be studied for the first time by tagging them with radioactivity and then following their movements by Geiger counters or other means.

The use of radioactive isotopes is very young. Without a doubt we may except to see increasing contributions to the biologic sciences by their use and hope to find more effective means of applying them in the control of neoplastic processes.

R. H. K.

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IS CENTRALIZED RESEARCH ECONOMICAL AND WISE?

It is needless to say that modern medicine is based firmly on a foundation of research both fundamentally scientific and clinical. Every doctor knows what a debt he owes to the researcher and to those agencies underwriting the large sums of money needed, whether through private philanthropy, the pharmaceutical industry or by our tax dollars expended by governmental bureaus.

To date the logical procedure for the advancement of medical science has been to provide the student of disease or in the fields of basic science with grants permitting him to carry out his studies, usually on clinical material in his locale. The National Research Council shows that in the six years 1946-51, the Federal funds for medical research have totaled $83,110,671 and private funds allotted have been $51,933,454, providing 61.5 and 38.5 per cent respectively. In 1946 private sources supplied $2,436,376 or 66 per cent of total research funds, whereas in 1951 they had increased to $11,108,006 but made up 44 per cent of total monies expended. Most grants were small, —68 per cent of $10,000 or less per year, and over half the projects received aid for three years.

A new philosophy has come into being which will be interesting to observe in its development, albeit it may be an expensive experiment. Time only will reveal whether this was conceived in wisdom or was another symptom of Washington megalomania.

There is abuilding at Bethesda, Maryland, a 14-story structure to cost, with equipment, $50,000,000 plus $10,000,000 for landscaping and auxiliary buildings. This is to be the Clinical Center of the National Institute of Health. The Director of the Center points out that patients will be referred to this hospital specifically for study, as examples of disease under investigation at the Center. He indicates that close cooperation must be maintained with medical schools and university hospitals for this purpose.

Surely your editor has no quarrel with the statement made by Surgeon-General Scheele that "costs of research are infinitesimal by comparison with the dollars and cents savings realized from more effective methods of preventing or treating disease." However, your editor would like to question, for discussion, the wisdom of this new policy for research.

1. How much will be gained by dislocating the patient from his home for study in Bethesda? The practical clinical researcher will know that few of the study cases will withstand homesickness for weeks or months in the cold environment of a research hospital, several thousands of miles from friends and family as in cases of coccidioidomycosis, perchance, transplanted from the San Joaquin Valley of California. Unless the patients are "sentenced" to Bethesda, what guarantee can one exact from humans, constituted as they are, that they will not go A.W.O.L. in the midst of study. In the home locale, the researcher at least can usually follow the patient and inveigle him back to ward or clinic for further studies.

2. Is it wiser to transplant a few examples of histoplasmosis from Tennessee, cases of malaria or amebiasis from New Orleans, or patients with leprosy from Carville, Louisiana, or from the West coast than to have more cases available for study where the disease is endemic? Or, is it wiser to send a physician of the U. S. Public Health Service to a university medical center to study problems peculiar to the region with the cooperation of the local investigative talent?

3. Though many of the selected cases will not stay for long terms in a research hospital, as the place becomes publicized it seems not unlikely that a horde of patients suffering from many ills, especially psychoneurotics and those "shopping around" and hoping for something "free," will present themselves at the doors of the Center. If the Center does not get its selected material from university hospitals or the Marine and like hospitals, it seems logical that the empty beds will be filled from the general run of patients with the hope of culling from them the desired research cases. Thus, may the Center end up as a sort of super-Marine Hospital? One wonders if political pressure may be used to fill empty beds with patients from among congressmen's constituents.

4. As the Director of the Clinical Center implied, the cases for study will need to be referred to Bethesda by medical schools and university hospitals. How successful will this be? Your editor questions seriously that medical schools will or *should* transfer interesting clinical material away from their centers and rob young staff members and others of stimulating problems in research. Local research is the whetstone on which the budding scientist and clinician can sharpen his wits. By depriving him of such an opportunity, a man of science may not flower to be a credit to the profession. Instead the problem may be worked out in the Center at Bethesda on an assignment level basis. Yes, it will be done well there, but has someone had his vision and enthusiasm stifled in the bargain? Time will tell whether

(Continued on page 255)

Special Item

In Our Hands.....

> *"This Constitution can end in despotism, as other forms have done before it, only the people shall become so corrupted as to need despotic government."—Benjamin Franklin, 1783.*

This is a year of decision and for this reason we are conducting a vigorous get-out-the-vote campaign. There is an undercurrent of feeling throughout America that "politics" is a dirty word and, in the minds of some, "a necessary evil." We are disturbed because we do not subscribe to that belief. Politics is an integral part of our Republic. The right to choose our public officials, with the proper balance between the legislative and executive branches of our government, is the basic principle of our free nation. We believe in the Constitution of the United States which established our Republic—the purest form of representative government that has ever been conceived in the minds of men. We further believe that the election to public office is a high trust to which free men can aspire.

True, we have been shocked and appalled over the reports of corruption, graft, malfeasance, and lack of moral integrity of men in important positions in government. However, it has not destroyed our faith in the *system* in which we believe. It is we, the people, who are responsible for the election of men to office, just as they also are responsible to us. In this program, we propose to offer a plan for a state-wide, grass-roots campaign to arouse the people as never before in a concerted effort to choose officials of high moral and spiritual integrity. Our proposal is, and will remain, completely non-partisan in its approach.

PUBLIC SERVICE COMMITTEE
TENNESSEE STATE MEDICAL ASSOCIATION

it was wiser to dull the investigative spirit at home and send the problem to Bethesda, or to give a grant to the young man of vision in the locale where the problem lies. Sixty million dollars plus the great annual overhead cost would provide a lot of grants and buy a lot of equipment! Will this new policy advance science more than Albright's laboratory at the Massachusetts General Hospital or Kendall's at the Mayo Clinic, to mention but two examples of the many in the country?

5. And last, but not least, your editor must point to the depletion of personnel in the medical schools! As has been shown before in these columns, there is a serious shortage of teachers in the preclinical sciences as well as teaching fellows in clinical medicine. Already the personnel is being recruited for the Center that is nearing completion near Washington. Your editor knows of men being enticed by higher salaries and fancy laboratories, technical assistance and easier hours, who otherwise might have accepted academic positions. It is more leisurely to sit thinking and smoking a pipe, while a technical assistant is watching the smoked drum in the animal experiment, by contrast to an academic appointment. In the latter the young researcher may have to make some of his own apparatus, do his own technical work far into the night, and at the same time must assist in teaching the medical student. Is it all gain, not to be forced to develop ingenuity and not to be exposed to precept in teaching and research by the professor? It is hoped that your editor is unduly pessimistic and that the new philosophy will not buy so much research personnel, with a loss of teaching personnel, as to lead to too many deserted laboratories with rusting flame-photometers, Warburg and Tiselius apparatus, while new ones are being installed in the Clinical Center. Furthermore, it is hoped that the reservoir of future teachers, especially in the preclinical fields, will not be depleted further to the point where medical instruction will suffer.

R. H. K.

* * *

CAMP FOR DIABETIC CHILDREN

The Tennessee Diabetes Association is sponsoring a worthy project in the Camp for Diabetic Children announced in the last section of this issue of the JOURNAL. A camp of this type has been established in two or three other states of the country. In such camps, living with other diabetics, children learn that they are not alone in their dependence upon the syringe and diet. This builds morale and represents good preventive psychiatry, making easier the adjustment of the handicapped child in society. Provision for including the diabetic child of parents unable to pay the necessary cost has been made through the generosity of certain individuals, civic clubs and the Association itself.

R. H. K.

DEATHS

Dr. James Hamilton Holman, retired EENT specialist of Cleveland, died May 18, 1952, after an extended illness. Aged 74.

Dr. Charles H. Johnson, Paris, Henry County Health Officer, died May 23, 1952, following a stroke several days earlier. Aged 79.

Dr. John Simpson Harris, McMinnville retired physician, died April 25, 1952, following a three-months' illness. Aged 84.

Dr. James M. J. VanDeGriff, Fountain City, retired, died May 14, 1952. Aged 77.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Memphis and Shelby County Medical Society

The program of the April 1 meeting consisted of a Symposium on Neurological Disorders Commonly Seen in General Practice: "Hemiplegia" by Dr. Carrol Turner; "Vertigo and Convulsions" by Dr. Nicholas Gotten; "Parkinsonism and Other Disorders of Movement" by Dr. Bland Cannon; "Multiple Sclerosis and Other Degenerations" by Dr. Robert Raskind.

* * *

A forum emphasizing the relation of the medical profession to the community was held by the Society during its regular meeting May 27. The dinner meeting, held at the Memphis Country Club, attracted one of the largest attendances in the history of the Society with some 350 members registering. Panel members were: Frank Miles, President, Memphis Trades and Labor Council (AFL); Lucius Burch, Memphis attorney, and brother of Dr. John Burch, Nashville; Frank R. Ahlgren, editor of the *Commercial Appeal;* and Leo Brown, Director of Public Relations of the AMA. The panelists gave their impression of the psysician's duties to his community. Panelists pleaded for more participation in public affairs, the spread of voluntary health insurance, a fight against socialism in any form (including socialized medicine) and a continued effort to make better medical care available and within the reach of everybody's pocketbook.

Representatives of the State Association attending were Dr. Daugh W. Smith, Nashville, President; Mr. Ed Bridges, Public Service Director; and V. O. Foster, Executive Secretary.

* * *

Sullivan-Johnson County Society

This Society has joined the growing list of local societies that have appointed grievance committees and announced the Committee to the public. Dr. R. Hyatt Brown, president, in making the public announcement which was carried in the *Kingsport Times-News* last month, urged the public to present their grievances to the Committee. For geographical convenience, the Committee was divided into two sections and the personnel announced for each section.

* * *

Chattanooga-Hamilton County Society

The May 8 meeting of the Society was held in the auditorium of the Interstate Building at 8:00 p.m. Dr. Edward G. Johnson was scheduled to speak on "The Spleen and Its Surgical Problems," with discussion to be led by Dr. W. R. Buttram. Dr. Merton Baker was also scheduled to present a paper on "Surgery of the Common Bile Duct," with Dr. Cooper McCall to lead the discussion. A motion picture on anesthesia completed the scientific program.

Knoxville Academy of Medicine

The regular meeting on May 13 consisted of a statistical report on East Tennessee Tuberculosis Hospital by Dr. Perry Huggin, a paper on "X-Ray Diagnosis of Tuberculosis" by Dr. Frank Rogers, and a case report by Dr. Melbrey Hendricks. Following the scientific session, Mr. Hayes Hartnett of the Hartnett-Geny Insurance Agency, Nashville, explained the new, exclusive sickness and accident insurance program available to members.

* * *

The guest speaker at the May 27 meeting of the Academy was Dr. Alvin J. Graham, of Memphis. Dr. Graham's subject was "The Role of the Family Doctor in Cerebral Palsy." The regular meeting was preceded by a demonstration diagnostic cerebral palsy clinic the previous afternoon when 13 patients with various types of palsy were presented. Dr. Graham served as demonstrator.

* * *

Nashville Academy of Medicine and Davidson County Medical Society

At the May 13 meeting a Symposium on Skeletal Tuberculosis was presented. Those taking part were Doctors Samuel Prevo, John R. Glover, Joseph G. Burd, Don L. Eyler, Eugene M. Regen and S. Benjamin Fowler. A dinner meeting was held on May 27, the guest speaker, Dr. Harry H. Gordon, Pediatrician-in-chief of Sinai Hospital, Baltimore, discussed "Some Problems in the Diagnosis and Treatment of Rheumatic Fever in Children."

* * *

Upper Cumberland Medical Association

The Upper Cumberland will meet at Red Boiling Springs on June 24-25. Dr. L. M. Freeman, Secretary, announces that an excellent scientific program is being arranged and all Tennessee physicians are cordially invited to attend.

NATIONAL NEWS

National Health Insurance

Federal Security Administrator Oscar Ewing says *the public is becoming "more* *insistent that a form of national health insurance become a reality,*" and he adds, "My friends, you will get it." His prediction was made in an address to the New Jersey State Federation of Labor. He said further: "But our work is far from done. The battle for security is only partly won. There are still big gaping holes in the fence we are building to protect your little bit of heaven. One of the biggest holes is the insecurity produced by illness. . . . For the past few years we have been fighting to provide the people of this country with security against the catastrophe of illness. We have been advocating a simple, national health insurance plan, along lines similar to social security."

Mr. Ewing said in addition: "The battle has indeed been acrimonious. . . . The noble profession of medicine was traduced and the reputations of the physician became a dishrag of politics. The honest, decent medical practitioners were compelled under threat of expulsion to contribute two million dollars to a smear campaign. . . . I doubt if the medical autarchy will be able to tax its members anew for another campaign against the health of the people. There is smoldering resentment among the rank and file of the medical profession. The honest, sincere, lovable practitioners do not wish to see their names befouled by the hucksters of Hippocrates. . . ."

MEDICAL NEWS IN TENNESSEE

Vanderbilt University School of Medicine

On May 14 a dinner was given in honor of Dr. Paul Lamson, retiring head of the Department of Pharmacology, a position which he had held since 1925. The guests included members of the faculty and their wives and a number of Dr. Lamson's former pupils now teachers of pharmacology at other medical schools or research directors of well-known pharmaceutical houses.

★

On May 25 members of the Department of Biochemistry and friends among the faculty honored Dr. C. S. Robinson by a picnic supper at his Mallory Valley Farm. He is retiring as head of the department after 22 years in this position.

★

University of Tennessee College of Medicine

The College was the subject of an article in the May issue of the Journal of the Student American Medical Association. The alumni will be pleased by the story of its steady and rapid progress since its consolidation in Memphis in 1913-14. Compliments are paid to its physical expansion, its personnel and forward-looking changes in its undergraduate curriculum and in postgraduate education.

★

Grants have been made by the American Cancer Society to the Department of Physiology as follows: $5,500 to Dr. Donald B. Zilversmit for the study of phospholipids in the utilization of fat and $6,500 to Dr. Richard R. Overman for the study of adrenal cortical function as related to permeability of the cell membrane to the ions of sodium and potassium.

★

Middle Tennessee Medical Association

The Association held its one-hundred-and-fifteenth meeting at Lebanon on May 15 under the presidency of Dr. James T. Boykin. The following program was presented:

"Use of Tricholerethylene in Obstetrical Analgesia" by Dr. Harry Moore, Nashville;

"Different Digitalis Preparations" by Dr. David Strayhorn, Nashville;

"Role of Physiotherapy in General Practice" by Dr. Don Eyler, Nashville;

"Treatment of Hay Fever and Asthma in Children" by Dr. James Overall, Nashville;

"New Wonder Drug for Tuberculosis? Iso Nicotinic Acid Hydrazide" by Dr. Robert McCracken, Nashville;

"Medicine's Stake in 1952 Elections" by Mr. V. O. Foster, Executive Secretary of Tennessee State Medical Association;

"External Otitis and Otomycosis (Fungus Infections of the Ear)" by Dr. J. Thomas Bryan, Nashville;

"Interpretation of the Urinalysis" by Dr. S. C. Garrison, Murfreesboro;

"ACTH and Cortisone in General Practice" by Dr. Thomas Frist, Nashville;

"Polyposis of the Colon" by Dr. Daugh Smith, Nashville.

Following the scientific session, a delicious barbeque dinner was served at the home of Dr. Kenneth Tilley. During the business session, the following officers were elected: President-elect, Dr. O. Reed Hill, Lebanon; Secretary-Treasurer, Dr. Frank G. Witherspoon, Nashville, re-elected; Trustee, Dr. Thayer Wilson, Carthage. Dr. Hill will succeed Dr. Thurman Shipley, Cookeville, in 1953, who became President during the meeting.

*

West Tennessee Medical and Surgical Association

The Association held its annual one-day session at Jackson Golf and Country Club on Thursday, May 22. More than 100 physicians from 21 West Tennessee counties attended. In addition to a symposium on "Office Gynecology," twelve other medical and surgical subjects were presented. The principal address was given by Dr. H. William Scott, professor of surgery, Vanderbilt. His subject was "Some Aspects of Cardiovascular Surgery."

During the business session, the following officers were elected: President, Dr. M. A. Blanton, Jr., Union City; First Vice-President, Dr. Forest McAnulty, Bolivar; Second Vice-President, Dr. James Fields, Milan; Secretary-Treasurer, Dr. Cecil Brown, Jackson. The 1953 meeting will be held in Dyersburg next May.

*

Postgraduate Circuit News

The fourth circuit in Internal Medicine by Dr. John F. Dee will close in the centers of Greeneville, Bristol, Kingsport, Elizabethton, and Johnson City on June 13, 1952. The entire staff of Mountain Home Veteran Hospital registered for the course under government contract. This circuit has the largest enrollment to date and reports are that Dr. Dee is giving an excellent course.

Dr. Dee has written that he is enjoying his clinics and consultations with the physicians of this area.

The fifth circuit of the course will open next in the centers of Knoxville, Morristown, Newport, La Follette, and Maryville the first week of July. Announcement letters were mailed to the physicians of this circuit early in May and the registrations received to date indicate the enrollment will be large for these centers. Mr. George Cummings, the Field Director, will visit in this area immediately to complete the registrations by solicitation and make final arrangements for the meetings.

While in the centers of circuit five, Dr. Dee will be available to local and state clubs for lay lectures. Interested groups should contact the local medical society secretary for arrangements.

Dr. Frank E. Whitacre of Memphis was appointed as a member of the postgraduate Committee at the State Meeting in Knoxville in April.

*

Applications for Hill-Burton Funds Exceed Appropriations

Dr. R. H. Hutcheson, Commissioner of Public Health, announced last month that applications for grants-in-aid for hospital construction under the Hill-Burton program exceed available funds next year. Dr. Hutchson said that approximately $2,700,000.00 in Federal Funds and $3,000,000.00 State Funds will be available, but that the Advisory Hospital Commission would have to tailor applications to available funds.

*

By courtesy of the AMA Washington Office, the status of all Hill-Burton hospital construction in Tennessee as of March 31 is as follows:

Completed and in Operation: Twenty-one projects at a total cost of $15,947,042, including federal contribution of $5,344,246 and supplying 1,126 additional beds.

Under Construction: Seventeen projects at a total cost of $28,750,330, including federal contribution of $10,086,739 and designed to supply 1,149 additional beds.

Approved, But Not Yet Under Construction: Eight projects at a total cost of $2,369,560, including $1,232,171 federal contribution and designed to supply 157 additional beds.

PERSONAL NEWS

Dr. J. Spencer Speed and **Dr. Marcus Stewart**, Memphis, will attend the joint meeting of the American, Canadian, and British Orthopedic Associations in London during the first week in July. Dr. Speed is the outgoing President of the American Orthopedic Association.

Dr. Fred Marsh, President of the Chattanooga-Hamilton County Medical Society, recently urged the regular periodic health examination for public school pupils when addressing the assembly program of the Chattanooga High School. He promised assistance from the Chattanooga-Hamilton County Medical Society in working out a suitable plan for the health examinations.

Dr. T. R. Ray of Shelbyville was reappointed recently to the Tennessee Public Health Council for a three-year term by Governor Browning.

Dr. S. Fred Strain of Memphis is the new President-Elect of the Memphis Heart Association.

Dr. Julian C. Lentz of Maryville addressed the Alcoa Rotary Club recently on the subject, "Rheumatic Fever."

Dr. Sam Sullenberger of Dandridge, President of the Hamblen County Medical Society, was recently elected President of the Cherokee-Douglas District Tuberculosis Association. He is also a member of the Board of Directors of the Tennessee Tuberculosis Association.

Dr. R. G. Tromley, Oak Ridge, has recently had a European tour of London, Paris, and Switzerland. He attended the International College of Surgeons in Madrid, and is scheduled to return to the United States June 16.

Dr. John L. Armstrong, Somerville, Program Chairman of the Somerville Lions Club, secured **Dr. Frank L. Roberts** of the faculty of the University of Tennessee Medical School to address the Club at a recent meeting.

Dr. William R. West, retired city physician of Knoxville, celebrated his ninety-first birthday last month. He has practiced medicine in Knoxville for more than forty years and has been in great demand as a public speaker.

Tennessee physicians who were on the program of the American College of Chest Physicians at its eighteenth annual meeting in Chicago this month were **Drs. Ross C. Kory, Dan C. Roehm, George R. Meneely,** and **Robert A. Goodwin**, all of Nashville, **Dr. David H. Waterman**, Knoxville, and **Dr. Duane Carr**, Memphis.

Dr. Foster Hampton, Jr., was host for a dinner meeting for about thirty of Chattanooga's specialists in internal medicine at the Fairyland Club recently. During the meeting **Dr. William Tuttle**, Secretary of the American Society of Chest Surgeons, addressed the group. Dr. Tuttle was also scheduled to speak to the Chattanooga-Hamilton County Medical Society at its monthly meeting on Thursday, May 22.

Dr. Conley H. Sanford of Memphis was elected to the Board of Governors of the American College of Physicians at its meeting in Cleveland, Ohio, in April.

LOCATION WANTED

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself.

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

*

A physician desiring a location in Tennessee writes as follows:

"I am 31, married, with three children, a native of Kentucky even though born in Chattanooga, and had 41 months of service in the Marine Air Corps during World War II. I graduated from Washington University in St. Louis in 1950 and served a rotating internship at St. Louis City Hospital from July 1, 1950, to July 1, 1951. At present I am taking a rotating residency at the charity hospital here in Monroe, Louisiana. The training here has a very large surgical component. My year here will be up June 30 and I will want to go into practice immediately thereafter."

LW-8

*

Location Wanted

A physician 27 years of age is interested in entering general practice in West Tennessee. Personal and professional data: Married, no children, Presbyterian. M.D. from Temple University, 1951; general rotating internship Temple University Hospital, 1952; has completed parts I and II National Board of Medical Examiners. Draft status—U. S. Navy service, 1943-46, honorable discharge, priority group II.

LW-12

*

A physician interested in private, associate or clinical practice of surgery, furnishes the following information: Aged 32, married, Baptist. M.D. from Washington University, 1944. One year rotating internship at Saint Louis City Hospital, 1944-45. Five-year surgical residency at Charleston, West Virginia, General Hospital, 1947-52. Two years' service with U. S. Army, 1945-47.

LW-11

*

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

*

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

*

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

*

The following letter has been received in this office:

"The Midland Community Improvement Club has built a medical center and now desires the services of a reputable doctor.

"This building has two offices, a waiting room, toilet and supply room, has oil heat, hot and cold running water, refrigerator and the equipment of the late Dr. V. S. Campbell of Murfreesboro, all of which will be furnished free of charge to a doctor willing to take charge.

"Midland is a rural community located midway between Murfreesboro and Shelbyville, fifteen miles from each place and the nearest doctors.

"We will appreciate any help you can give us in securing a doctor.

"For further information please contact the undersigned:

"Sincerely yours,
James I. Williams
Fosterville, Tennessee"

PW-9

*

Physician Wanted

Tennessee State Medical Association
Nashville, Tennessee
Dear Sirs:

I am coming to you for assistance to see if you can help us locate a doctor who would be interested in coming to the City of Cumberland Gap. Our small town of approximately 500 people is the only incorporated city in Claiborne County. We have not had a doctor for some time and we desperately need one. We used to have four doctors here. Any good doctor could easily make two or three thousand dollars a month. Tazewell is 13 miles away and doctors there will not come here, and doctors in Middlesboro, Kentucky, positively will not come over here. Last night I called three and not one would agree to come to see my daughter who was ill.

Anything you can do to help us in securing one or two doctors will be greatly appreciated. Office space and living quarters are available.

Yours very truly,
J. S. Collins
Councilman
City of Cumberland Gap

*

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville, Tennessee.

ANNOUNCEMENTS

The American Congress of Physical Medicine

The thirtieth annual scientific and clinical session of the American Congress of Physical Medicine will be held on August 25-29, 1952, inclusive, at the Roosevelt Hotel, New York, New York. Scientific and clinical sessions will be given on the days of August 25-29. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, annual instruction seminars will be held. These lectures will be open to physicians as well as to therapists, who are registered with the American Registry of Physical Therapists or the American Occupational Therapy Association. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

Dr. Lawrence to Retire September 1

Dr. Joseph S. Lawrence, who has served as director of the American Medical Association's Washington office since 1944, will retire September 1. His successor will be the present deputy director, Dr. Frank E. Wilson.

The AMA Chicago session in June will be Dr. Lawrence's last in his capacity as director of the Washington office. Many of his friends within the medical field are planning a "subscription luncheon" for him on Sunday, June 8—the day before the AMA session opens officially.

Scholarships Available

Seven scholarships in rheumatic fever and heart disease in children are available through the State Crippled Children's agencies in various educational institutions as follows:

One fellowship—House of Good Samaritan, Boston Massachusetts.

Two fellowships—Yale University, New Haven, Connecticut.

One fellowship—New York State.

Three fellowships—With Dr. Taussig at Johns Hopkins, Baltimore, Maryland.

These fellowships, which offer a fellowship in rheumatic fever and heart disease in children for a year's duration, cover a stipend of $4,000 and travel expenses. Those interested may write to the State Health Department in the state where they are interested in the fellowship.

*

Dr. W. Winston Barnard, who has just completed his internship in John Gaston Hospital in Memphis, has begun the practice of medicine in Dyer, Tennessee. Dr. Barnard is occupying **Dr. F. Douglass'** office in the Dyer Clinic. Dr. Douglass recently suffered a severe heart attack, but is recuperating.

Dr. R. K. Landis of Woodbine (near Nashville), and a nominee for the Outstanding General Practitioner of Tennessee for 1952, has returned to his office.

Dr. Charles F. Webb, owner and operator, with his son, **Dr. Charles H. Webb**, of the Webb-Williamson Hospital in Jackson, announced recently that a two story wing will be added to the present structure in order to provide eighteen more rooms and other clinical facilities to the hospital.

Dr. C. E. Gossett of Arkansas is expected to arrive in Pulaski sometime this month to begin his practice with offices in the First National Bank Building. Through the generosity of the late Dr. Thomas F. Booth, Dr. Gossett will receive Dr. Booth's medical and surgical equipment, as provided in his will.

Tennessee Camp for Diabetic Children

Sponsored by the Tennessee Diabetic Association, Inc.
Date: August 3 through August 17
Place: Camp Glancy—Sequatchie, Tennessee
Children: Diabetics—Boys and Girls age 7 through 14
Supervision: Resident physician, dieticians, members of Tennessee Diabetes Association.
Fee: $75 includes cost of insulin—Any diabetic child eligible to attend camp should be registered. Deserving children will be cared for regardless of ability to pay.
Applications: Must be in by July 7.
Write to:
Tennessee Camp for Diabetic Children
301 Medical Arts Building
Chattanooga, Tennessee

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T. G. Cranwell, Pikeville (1953)
James A. Loveless, Gallatin (1955)
Hunter Steadman, Henderson (1953)
John L. Armstrong, Somerville (1955)
J. T. Carter, Germantown (1954)

Grievance Committee
N. S. Shofner, Chairman, Nashville (1953)
Ralph Monger, Knoxville (1954)
Ernest G. Kelly, Memphis (1955)

Blood Banks
M. L. Trumbull, Chairman, Memphis
David K. Gotwald, Nashville
Jack Adams, Chattanooga

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In this address the medical profession can see plotted certain aspects of its future course. It behooves every member to so conduct himself that criticism may be at the minimum. Of dissatisfaction is born the demand for governmental medicine. A small minority of irresponsible doctors can tip the scales.

THE OUTLOOK AND THE PROBLEMS OF MEDICINE

LOUIS H. BAUER, M.D.*

Medicine has become a different profession than it was fifty or even twenty-five years ago.

Fifty years ago medicine was an art and there was little, if any, science about it. During the past twenty-five years, it has become not only a science as well as an art, but the science has predominated.

As a result medicine has become more complicated and more expensive. In many areas it has become less personalized. The pendulum in specialization has swung far over in that direction. For a time it seemed that the general practitioner might vanish from the scene.

During the past few years, however, the pendulum has begun to swing back and there has been an increased trend to general practice. This is fortunate, both for the public and for medicine. Had the trend continued as it was, it would have meant the end of the private practice of medicine as we have known it for many years.

It is true that no one man can now know all there is to know about medicine and, in fact, it is difficult for one man to know all there is to be known even in one limited specialty. Nevertheless, it is still possible for one man to have a general survey of medicine, know his limitations, know when to call a consultant and when to act as a general family physician. The greatest tragedy that could happen would be for the general practitioner to cease to exist. The greatest lament one has heard in recent years from the public is that it is difficult to obtain a family doctor.

After all, 85 per cent of the ills for which a physician is called can be handled by a general practitioner, with perhaps occasional consultations with a specialist. The other 15 per cent probably require a specialist's care.

There is no doubt that we have become overspecialized, and I am glad to see the gradual reversal of the swing. During the past three years there has been an increasing number of medical school graduates who have turned to general practice.

Medicine has changed in other ways also.

In the scientific phases of medicine we have seen tremendous advances. The advent of the sulfa drugs and then that of the antibiotics has revolutionized medicine. Diseases which were formerly prevalent and with a high mortality, and diseases for which there was nothing but empiric treatment have been brought under control, their duration shortened, complications lessened and mortality drastically reduced. Maternal and infant mortality have been greatly lowered. Conditions formerly inoperable have responded to modern surgery. Preventive medicine has become as important as curative medicine. There is no reason to believe that any disease exists for which prevention and cure will not be found eventually.

All this leads to longer life. The average life span has increased twenty years in the last fifty years and will probably continue to increase. This brings up economic problems. At the present time, the increased life span has resulted in millions living to an age at which they are subject to the degenerative diseases accompanying old age. This poses an immediate problem,—the care and treatment of chronic and degenerative disease. However, if we continue our scientific advances those chronic and degenerative diseases may well be brought under control or prevented. If this comes to pass the span of life will be still further increased, and the economic problems will multiply further.

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*As President-Elect of the American Medical Association, Dr. Bauer, presented this address before the Tennessee State Medical Association at PRESIDENT'S NIGHT, Knoxville, April 8, 1952.

During the past quarter of a century the methods of delivering medical care have undergone many changes. The status of the physician has been altered greatly in his relationship to society and government in many areas, and to some extent in all areas.

Government has come to play an increasing part in medicine. To some degree this is essential. Many phases of public health cannot be adequately controlled without the participation of government. For example, environmental sanitation, protection of food, milk and water supplies and control of insect borne diseases must be a function of government health departments, for such matters must be carried out on a community basis and require police power. Immunization against certain diseases, such as smallpox, diphtheria, tetanus, typhoid, typhus, cholera, plague, yellow fever, etc. is a problem that concerns individual physicians, occasionally health departments, but also education of the public to make it aware of the necessity for preventative measures.

Government and the public also must be concerned in certain phases of social medicine,—that branch of medicine which represents the relationship of the patient to his whole environment. Proper housing, nutrition and elimination of slums require the action, in some cases, of civic groups, governmental cooperation and education of the public.

Tuberculosis and the so-called contagious group of diseases are a joint problem of the individual physician and the health department, the former in treatment and the latter in protection of the public against the spread of those diseases. Mental disease is now very largely cared for in governmental institutions.

Medicine is no longer solely a matter for the medical profession. The public needs education on the dangers of certain diseases and how to prevent them, the necessity of early immunization, the dangers of self-medication, charlatanism and quackery. It should be kept informed of the resources of medicine and the necessity for the protection of medical research.

Many phases of health require group action, including that of nurses, physiotherapists, social welfare workers, voluntary health agencies, official health departments and the professional associations. Each has a particular role to play, but the medical profession should be leaders in any health program. Community Health Councils should include representatives of all groups interested in health programs, but physicians should be leaders in their establishment.

The prepayment system for medical care has come to stay. The question to be decided is whether this system should be voluntary or compulsory. In many areas of the world it is compulsory. In this country, so far, we have kept it on a voluntary basis. Whether or not we continue to do so depends largely on the medical profession. Many seem to feel that we have won our fight against socialized medicine. I assure you we have not, and we cannot relax. We have won a breathing space. The socializers are not for the moment trying to move a program of socialized medicine in through the front door, but they are still trying to inch it in by degrees through the back door. They have not given up nor will they give up until the American people show that they will have no more of socialism, whether it is in the form of admitted socialism or in the form of pink sugar-coated medical pills.

I have had the opportunity during the past four years to visit Europe nine times. In not one single country have the plans involving greater participation of government resulted in a bettering of medical care, and in many they have resulted in a poorer type of medical care. The medical profession is usually at odds with the government, the government ignores the medical profession and professional matters are decided by laymen. There seems no doubt but that wherever government has established a stranglehold on medical care that it is the eventual aim of government to make doctors full-time salaried servants of the state. History shows that wherever government gets its foot in the door of medical care, there is more and more government control, more and more regimentation, steadily increasing deficits in the insurance plans and deterioration of the standards of medical care. The public is the loser.

In this country the matter has become political. The majority of the local proponents of compulsory health insurance are either socialistic in their thinking, or using the proposal as a lure to get votes by offering the public something they cannot possibly deliver. The Right Honorable Sir Earle Page, Health Minister of Australia, has stated in substance that it is impossible to make any health plan work which will not enlist the cooperation of those who have to carry it out. In other words, no health plan can be carried out without the help of the medical profession and if they disapprove the plan, it cannot be made a success.

There is no necessity of my taking the time of this audience to state the reasons why compulsory health insurance is unacceptable. You all know the reasons as well as I do.

If you do not want it to come to pass, then there are certain things which must be done.

We must see to it that the scope of public health units as defined by the American Medical Association is generally accepted, and then coverage within that scope must be extended to the whole country.

Diagnostic facilities must be made available within reasonable distance of any community.

Hospital facilities must be adequate, but full use must be made of existing facilities before new ones are built. Local pride or local politics must not be allowed to result in the building of a hospital in an area that does not have one, when adequate facilities are available within a few miles and good roads lead to those facilities.

Agreements must be made between the medical profession and local government agencies to insure adequate medical care to the indigent. The indigent are not an insurable risk. The problem has been solved in some areas and can be in all.

Our voluntary insurance program already of tremendous growth, must be still further expanded to cover the gaps in coverage now existing. The three particular requirements are further development of individual coverage, further protection for those over age 65, and protection against financially catastrophic illness. The voluntary program will not be a complete success until these are accomplished. Progress is being made and I am convinced that they will be accomplished. The medical profession must give 100 per cent cooperation to the voluntary plans. Many physicians are still indifferent and some openly hostile.

We must realize that we cannot practice medicine as we did twenty-five years ago. We have to face things as they are and not as we might like to have them.

The doctors must clean house. Grievance committees have been organized in many sections of the country. They will be worthless, however, unless medical societies are relentless in disciplining those few physicians who make a racket of medicine and charge exorbitant fees. Once the public realizes that the profession will not tolerate chiseling, the standing of the profession will be enhanced. One such racketeer does more harm than 100 ethical physicians can make up for. There is only one way to handle such an individual and that is to expel him from organized medicine. I have said before and I expect to say it many times more—there is no place in medicine for the man who thinks only of himself and his income.

Panels for night and emergency calls must be available everywhere. The public must be able to obtain a physician when it needs one.

We must see to it in the future that our county societies become revitalized and are forces for good in the community. As I have already said, it is my opinion that the pendulum toward specialization has swung too far. It is now swinging back and I believe that we may see an increasing trend toward general practice. The general practitioner must remain the keystone in the arch of the practice of medicine and should he cease to be, we shall lose the support of the public.

In the future, therefore, we may look to extension of public health coverage, with the participation of local government in that field; to extension of hospital and diagnostic facilities with perhaps more interlocking with large medical centers; a better balance between general practice and specialization; extension of prepaid hospital and medical care insurance on the voluntary basis; the development of community responsibility in health problems with all agencies interested in health forming a Community Health Council. Health and medicine require teamwork. The physician must be captain of the team. He must be familiar with not only curative medicine, but also with preventive medicine, social medicine and medical economics.

None of this will be possible unless the medical profession stands together as a unit; unless it furthers the objectives necessary; unless it convinces the public that while the physician needs help from other individuals and agencies, no one can take his place nor afford the leadership he is competent to provide. The confidential relationship between physician and patient must be maintained. If that is lost, medicine will degenerate into an assembly line product.

Finally, we must arouse the public to a realization that if medical science is to progress, if the standards of medical education and medical care are to be maintained and advanced, then socialization of medicine cannot be tolerated as it is only one further step toward the socialization of our entire economy with a loss of American traditions, institutions and all that has made the United States the greatest country in the world.

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Backache, that complaint which is endless in frequency, poses the daily problem of management. The conservative management of this complaint is so often satisfactory and can be so well carried out by the family physician as to make consultative advice quite generally unnecessary.

CONSERVATIVE MANAGEMENT OF THE LOW BACK SYNDROME*

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Introduction

In this paper we shall present a discussion of the basic measures commonly employed in the treatment of low back pain, both with and without sciatic pain. We shall deal primarily with the conservative management of backache since most conservative measures are available to all physicians.

(1) Severe back pain, with and without sciatica clears up spontaneously in a high percentage of cases, and this of course was true long before the real significance of "ruptured disc" was understood. Based on this observation we feel that (2) our treatment must be conservative until adequate conservative treatment has failed. Even the most severe cases of sciatica usually respond to conservative treatment and (3) very rarely should this condition be considered a surgical emergency. Obviously then, only those physicians who are actively engaged in the conservative treatment of backache are competent to select cases for surgical treatment.

When planning the treatment and rehabilitation of a specific individual with the low back syndrome we have in mind that particular person's history, physical examination, X-ray findings, laboratory studies and perhaps the opinions of consultants; such information makes planning easy. In the present discussion, however, we must deal in generalities and should, therefore, begin with at least a basic understanding of the pathology which exists in most of these cases.

Definition of Terms

Today, it is almost universally held that low back pain is "mechanical" in origin and that its symptoms result from mechanical wear and tear at one or more levels in the spine. Usually the lumbosacral junction is involved since it is the fulcrum of a long lever. There is of course much argument about the exact "pathological mechanics" of the various types of low back pain, but for sake of discussion a good basic concept would be that the intervertebral disc in question wears out and degenerates and finally ruptures. If the disc ruptures into or through the annulus laterally or anteriorly, we have a "catch" in the back or lumbago; if, however, it ruptures into the spinal canal and produces direct pressure on one of the nerve roots we have lumbago plus sciatica. At any rate, if we can convince ourselves that we are dealing with a purely mechanical problem, we can treat our patients intelligently with purely mechanical measures.

Thus we believe that:—

1. There must be a mechanically weak spot in this back,
2. Such factors as normal activity, occupational stress and accidental injury lead to a typical degenerative (or mechanical) arthritis at the weak level, and
3. We do not believe that a normal disc will ever rupture.

There are many conditions which produce backache, making a careful diagnostic study most important. The following is a partial list of conditions which must be considered prior to accepting the diagnosis of mechanical back pain.

1. Severe trauma—such as fracture or dislocation, old or recent.
2. Obvious mechanical deformities—such as scoliosis, kyphosis, short leg, stiff hip, etc.

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

†From the Bagwell-Brashear Clinic, Knoxville, Tennessee.

3. Osteochondritis—i.e. the juvenile round back.
4. Various arthritides.
5. Tumors which may be of soft tissue or bony origin, and they may be intra- or extra-spinal.
6. Blood dyscrasias with bone changes.
7. True infections — tuberculosis, osteomyelitis and epidural abscess.
8. Pelvic and kidney disorders.
9. Psychoneurosis and hysteria.
10. Malingering.

Treatment

The following classification of backache lends itself well to plans for treatment and rehabilitation, since therapeutic measures employed will depend largely on severity and duration of symptoms.

1. Low back pain:—
   - A. Acute mild—recurrent, or not (with or without sciatica)
   - B. Acute severe—recurrent, or not (with or without sciatica)
   - C. Chronic mild—with or without acute episodes (with or without sciatica)
   - D. Chronic severe—with or without acute episodes (with or without sciatica)

A great difference should be made between patients with and without sciatica. Sciatica is an ill omen. It means irritation of the sciatic nerve trunk or of one or more of its nerve roots. We can temporize with backache, but we must treat sciatica in earnest. People who have sciatica, even mild sciatica should be put at absolute bed rest regardless of their economic status or other personal difficulties.

We have divided the various therapeutic measures available for conservative treatment into: first, those employed for the treatment of pain and, secondly, those employed in the protection and rehabilitation of the weak back. These measures overlap a great deal and the rehabilitation program may be used for the post-operative weak back as well as the weak back not operated upon.

Manipulation—We consider manipulation first, not because we advocate its general use, but to dispose of it. We have been scientifically trained not to do things which we do not fully understand, and so far no one has adequately explained exactly what happens when an acute attack of low back pain is suddenly and completely relieved by manipulation. However, the very obvious fact that the low back syndrome is relieved by manipulators every day, makes it a very intriguing problem and one which is being carefully studied by many orthopedists.

Back Strapping—This is as useful as it is simple. It may be employed alone or combined with the injection of procaine into a localized area of tenderness. It is particularly good treatment in the milder cases without sciatica and in those individuals who insist that they cannot go to bed, doctors for example.

To get maximum support from adhesive strapping one should pass the adhesive around the entire trunk and should extend it well up on the ribs and well down on the buttocks. This prevents much of the slipping and blistering which is so common. The abdomen is covered with flannelette and the adhesive is placed over the abdomen loosely and pulled tightly over the back. Thus a semi-rigid corset is fashioned and usually the patient is partly relieved at once.

Bed Rest—Bed rest, in a hospital. If we are to believe that low back pain results from wear and tear, we must accept the statement that "bed rest is the best treatment for low back pain." Most patients do well on a firm bed, which can be very simply arranged by placing heavy plywood between the springs and mattress. This takes the end to end sag out of the bed and a great majority of patients are benefited, whether in the acute or chronic phase. I am sure that some of the so called orthopedic mattresses accomplish the same thing, at a price.

Not all patients can be treated on a flat surface; a few will require a mild Fowler's position. Actually we must treat the backache patient in the most comfortable position possible.

We feel that all cases of severe back pain with sciatica should be hospitalized. Few people actually stay in bed at home, and many find it difficult to stay in bed without the benefit of proper sedatives and muscle relaxants. We do not know how often operation for ruptured disc is avoided by this sort of *urgent* conservative program, but we see many cases of severe sciatica with diminished sensation and loss of ankle jerk clear up after a week or two of hospital care.

Traction—At first glance one might feel that traction or Buck's extension is surely an instrument of torture, held over from the Spanish Inquisition, but actually it was devised to place a mild but steady pull on spastic muscles thus overcoming and relieving their spasm. Occasionally this method of treatment *proves* to be a method of torture and must be modified by flexing the hips and knees or even be removed entirely. We usually begin with a three pound pull, until the adhesive has set to the skin securely, and increase the pull up to eight pounds. This is enough weight and is about all skin traction will stand. Traction also has the very great advantage of keeping the patient in bed.

Heat and Massage—Heat and massage once or twice daily add greatly to the patient's comfort and help to relieve muscle spasm. An electric pad to the sore area one hour out of every four is often helpful and we feel that the counter irritant effect of strong liniments is worthwhile.

Sedation—This is used as needed. In severe cases narcotics and the various muscle relaxants are employed. Intravenous procaine and intravenous alcohol may be of great benefit. Tolsorol and Diloxal are very commonly used.

Local Injection of Procaine—The use of this procedure is very beneficial when a so-called "trigger point" can be located, and occasionally this very simple measure may relieve the entire acute low back syndrome.

The measures described above have been aimed at treatment of the acute episode, or the severe chronic low back pain. We normally expect the patient to show some improvement within seven to ten days. If no improvement is noted, our patient should be re-examined and re-evaluated and more radical treatment seriously considered.

Rehabilitation

If our patient shows definite improvement, we must begin the rehabilitation program as soon as possible. The program of rehabilitation outlined here may be applied to the post-operative backs as well, but will have to vary with such factors as age, body weight, status of cardiovascular system, intercurrent disease, degree of pain, etc. To succeed you must sell your rehabilitation program to your patient. Here the services of a physiotherapist are invaluable. The patient must realize that he does have a weak back and that your rehabilitation program is designed to:

1. Protect his weak back, and
2. To make it strong again.

Measures Designed to Protect the Weak Back:

1. Rest as needed and further drug treatment if desirable.
2. Bed boards when tolerated.
3. Braces.
4. "Horse" sense.

Bed Boards—These are advised for all sufferers of low back pain as a part of good body mechanics, and rest periods are employed in the early days of rehabilitation to avoid recurrence of acute symptoms.

Braces—Braces or supports are frequently needed for protection of the weak back but their use should be avoided if possible. Although a brace may be very gratifying to the patient who needs it, we must always remember that a brace makes a weak back weaker, and therefore should be discarded as rapidly as possible. The exact time to discard a brace will depend upon the patient's response to the rehabilitation program. The patient should not be lead to believe that a brace will cure his back. He should use his brace prophylactically, so to speak.

"Horse Sense" Measures—A complete understanding of your patient's occupation is essential. Some modification of occupation is often possible and occasionally a complete change of occupation may be advisable. We cannot change the duties of a housewife, but we can teach her to sit and stand properly, we can teach her how to pick up her baby with minimal strain on her back. We can advise her to have her ironing board and sink raised, and she can learn to mop and sweep in a more erect position. In other words we ask her to protect her back as much as possible while our rehabilitation program is in progress.

Rehabilitation of the Weak Back:

1. Heat and massage may be continued.
2. Exercises for muscles of posture.
3. Development of good body mechanics.
4. Athletic activities.

Exercises—Patients are started on postural exercises as soon as pain permits. Let me mention the part played by the physiotherapist again for emphasis. A good physiotherapist will not only teach your patient to do the exercises you prescribe, but will help to convince your patient that the exercise program is the one thing that will prevent recurrences.

The exercises which we use are very simple and very brief. We have already convinced our patient that back bending is partly responsible for his pain and perhaps we have put him into a brace to prevent back bending, so now we teach him to develop the muscles of posture without bending (and thereby wearing out his already weak low back). Actually this idea is based on the physiological fact that to make a muscle stronger we must force it to do more than it is accustomed to do, we must strain it to the point of tolerance. Therefore we use exercises which inflict the maximum strain on the muscles of posture with the minimum amount of bending of the back.

We feel that two very simple exercises are sufficient. In the first exercise the patient is lying face downward. The legs are raised with the knees stiff, while the trunk is raised and the patient is asked to strain as hard as possible. In the second exercise the patient lies face up and picks the legs up with the knees stiff but only four inches from the table. This strains all the muscles on the anterior aspect of the spine and as the muscles become stronger the feet may be weighted down. We must convince the patient that the greater the strain the better the exercise.

Body Mechanics—To change a patient's "postural habits" is often difficult and at times impossible. An appeal to personal vanity is helpful in a small number of cases, but often there is little vanity left in a tired housewife who has just finished the week's washing. We try to teach the patient to associate good posture with those things he does often and in private. For example, when walking up and down stairs, and when entering or leaving a bath room, the patient is told to "strain up," don't "pull up."

While shaving, a man can get a lot of straining exercise for his back and buttocks. Have the man who must sit in a car or truck all day place a small drop of paint on his windshield right in his field of vision to remind him to sit properly, or to use a pillow behind his back for the same purpose.

Athletics—Now comes the question of athletic activity. Many of your patients will belong to bowling clubs; or they may like tennis or badminton. We feel that no exercise requiring quick starts and stops is desirable.

Swimming is the best outdoor exercise. Diving should be forbidden except for experts. Horseback riding is an ideal exercise if the rider can control his mount since all horseback riders sit properly. Hunting and fishing are good. Golf is permissable, for most of the exercise is walking, while the swing of golf is under volitional control and very rarely does a golfer injure his back.

Summary

We have presented certain basic concepts in the treatment of low back pain and have offered a scheme of treatment which can be altered to fit the needs of most sufferers of backache.

Discussion

DR. H. B. BOYD'S (*Discussion*)—Mr. President and members of the Tennessee State Medical Association, it is indeed a pleasure to discuss Dr. Brashear's excellent and well presented paper. He has given a good summary of a complicated and difficult problem, including an excellent outline of the conservation treatment of low back pain. I wish to emphasize the fact that patients with low back pain should be given a thorough trial of conservative treatment before surgery is considered. However, if the signs and symptoms are such that a reasonably positive diagnosis, which justifies an operation can be made, conservative treatment should not be prolonged to the detriment of the patient, both from the standpoint of the pain which he is enduring and the financial handicap resulting from prolonged periods of disability.

Study of the bone marrow has become an important item in our diagnostic armamentarium, not only as related to the blood dyscrasias, but also to other systemic diseases. The simplest method, applicable in most cases, is the aspiration of marrow contents by a special needle. The evaluation of the smear must be in the hands of a competent clinical pathologist or hematologist.

INDICATIONS FOR BONE MARROW EXAMINATIONS*

MERLIN L. TRUMBULL, M.D., and ANNETTE KELLY, A.B., Memphis, Tenn.

Not infrequently our clinical colleagues ask if a bone marrow examination would aid in establishing the diagnosis of an obscure case. This question is not answered by most textbooks on clinical pathology. Their usual treatment is to describe the marrow findings under each disease, but this does not answer the practitioner's question when he simply wants to learn if a bone marrow examination would help him. In an effort to answer this question it seemed worthwhile, therefore, to review our own experience with bone marrow examinations. More specifically we want to learn just what were the symptoms, or signs, or laboratory findings which most often led to real help in examining the marrow. In private practice, examination of the marrow should be limited to those cases in which the diagnosis cannot be made by study of the peripheral blood or when it may assist in the control of treatment. Actually most problems in hematology do not require a marrow examination.

Our findings are based upon a study of one hundred consecutive hospitalized patients who had a bone marrow examination. This covers a period beginning January 1, 1950, and ending May 19, 1951. The admission diagnosis, significant abnormal laboratory findings, diagnosis of the aspirated marrow material, the final discharge diagnosis, and the probable role or influence of the marrow study were tabulated for each case. This role of the marrow examination was classified as follows: diagnostic, confirmatory, to exclude other possible diseases and non-contributory.

Observations

A summary of the role of the bone marrow examinations is found in Table I. It is seen that the greatest diagnostic aid among the *anemias* was obtained in that group showing marked loss of functioning marrow due to undetermined causes. In the two cases of *pernicious anemia* the marrow study did not help because in both instances the patients had received liver therapy just prior to their hospital admission. This specific treatment caused the marrow to revert to its normal appearance. The marrow studies in the remaining cases of anemia either confirmed the type of anemia suspected or excluded other diseases.

TABLE I. ROLE OF MARROW STUDY IN 100 CONSECUTIVE PATIENTS

Disease	*No. Cases*	*Diagnostic*	*Confirmatory*	*To Exclude*	*Non-Contributory*
Aplastic and myelosclerotic anemia	5	4			1
Hypochromic microcytic anemia	10		4	5	1
Pernicious anemia	2				2
Miscellaneous anemias	4			4	
Myelogenous leukemia	5	2	1		2
Lymphocytic leukemia	12	4	6		2
Monocytic leukemia	1	1			
Stem cell leukemia	4	2	2		
Lymphoma (without evidence of leukemia)	6	2		2	2
Plasma cell myeloma	3	1		1	1
Metastatic carcinoma to marrow (suspected and/or confirmed)	10	5	1	4	
Idiopathic thrombocytopenic purpura	6	4	1	1	
Infectious mononucleosis	2			2	
Miscellaneous conditions	30			28	2
Total	100	25	15	47	13

Among the cases of *leukemia* the marrow was scored as being of diagnostic importance in cases such as the following:

CASE 13. A 66 year old, white male with hemoptysis of unknown cause, and with moderate pancytopenia and a slight shift to the left of the granulocytic series.

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

CASE 14. A 70 year old, white male with bleeding from the nose and gums and with pancytopenia.

CASE 22. A 12 year old, white female considered to have rheumatic fever with migratory joint pains. Later she had a differential white blood count showing eighty-three per cent lymphocytes, and seven of these were atypical. X-ray examination suggested the diagnosis of leukemia by virtue of bone changes in the arms and legs. This led to the marrow examination and subsequent establishment of the diagnosis of lymphatic leukemia.

CASE 23. A 60 year old, white female with pancytopenia with sixty-nine per cent atypical cells in the peripheral blood.

In some of these cases leukemia was not suspected, whereas, in others it was. However, it was felt that the diagnosis of leukemia was not sufficiently substantiated to justify the attendant prognosis and therapy until the bone marrow examination was performed.

One case in which the marrow study was scored as non-contributory deserves comment. The patient was originally diagnosed as having hypersplenism with splenomegaly after careful clinical and laboratory study. A splenectomy was done, but seven months later he was re-admitted to the hospital in a terminal condition with myelogenous leukemia.

Among our six patients with one of the *lymphomas* the marrow examinations proved to be diagnostic in only two. In two others it excluded some of the lesions which could produce a febrile picture.

The diagnosis of *plasma cell myeloma* was established by sternal marrow examination in one case. Another patient, in whom the examination was scored as one to exclude other possibilities, was a known case of plasma cell myeloma with an apparent solitary lesion of the right clavicle. It was then decided that if the marrow from the sternum failed to show further extension of the tumor, that the lesion in the clavicle should be removed surgically. This was performed, but unfortunately several months later the patient showed radiological evidence of additional lesions.

There were five cases of *metastatic carcinoma* to the bone marrow. One of these presented a pancytopenia with some shift to the left of the granulocytes. This patient, a forty-four year old female, developed a probable pathological fracture of a vertebra. Although metastatic tumor was suspected, this diagnosis was not established until malignant tumor cells, probably carcinoma, were found in the sternal marrow aspirations. Another patient, a sixty-five year old male, entered the hospital with a pancytopenia and a very rapidly progressive and extensive purpura. Carcinoma cells were aspirated from the marrow. This finding had not been anticipated although the patient had had a sub-total gastrectomy four years earlier for a carcinoma of his stomach.

In the two cases with *infectious mononucleosis* the marrow aspiration served to exclude leukemia. It can be added that the diagnosis of infectious mononucleosis did not rest upon the marrow study.

In the thirty cases with miscellaneous diagnoses the marrow examination was used principally to exclude certain lesions.

In an effort to learn just what clinical features or findings in the peripheral blood most often led to diagnostic help from a marrow examination, an analysis was then made of those cases in which bone marrow studies were scored as having a diagnostic role. A summary of the chief findings observed just prior to the marrow study in these cases is tabulated in Table II. It is apparent from this table that twenty-one of these twenty-five cases showed alterations in their peripheral blood pictures. Also, it was apparent that the changes in the peripheral blood in the absence of a satisfactory diagnosis led to the examination of the marrow. In addition there were three cases suspected of having metastatic tumor involving the marrow. Two of these had hemoglobin values of less than 7.5 grams per 100 ml. and proportionately depressed red cell counts. The one case in which bone marrow study was done, because of changes observed upon radiological examination, was

TABLE II.

Chief Findings Just Prior to Marrow Study in "Diagnostic" Cases	*No. Cases*
Pancytopenia (with or without atypical cells in peripheral blood)	9
Abnormal white blood count and smear	5
Idiopathic thrombocytopenic purpura	4
Suspected metastatic tumor to marrow	3
Extreme anemia	3
Suggested by x-ray changes	1
Total	25

showing at the same time a relative lymphocytosis with a few abnormal forms in the peripheral blood. In retrospect there is reason to think that indications for the marrow examination existed before the radiologist's report was made. The only case without a distinctly abnormal peripheral blood picture was a patient with metastatic carcinoma involving the marrow. Therefore, twenty-four out of twenty-five cases, or ninety-six per cent, of those patients whose marrows were diagnostic showed significant changes in their peripheral blood. As a corollary of this statement, we might say that in only four per cent of the cases was a marrow examination suggested in the absence of significant changes in the peripheral blood.

A few textbooks in clinical pathology discuss briefly the indications for marrow examinations. Ham[8] presents an excellent simplified outline, and the discussion by Diggs in Miller's textbook[10] is an equally good summary as well as a detailed treatise on technique and interpretation. Wintrobe[12] in his textbook devoted entirely to hematology concisely discusses those general conditions wherein marrow examinations can be expected to help.

Our studies confirmed the fact that most anemias can usually be diagnosed without difficulty by careful examination of the peripheral blood. The notable exception is in that group with non-regenerative, atrophic marrows such as *aplastic anemia* and *myelosclerosis.* These lesions require the bone marrow examination to establish the diagnosis. Usually the operator encounters difficulty in aspirating marrow in such cases, and these are often described as "dry taps" simply because the marrow is largely fibrotic and does not easily lend itself to removal by aspiration methods. The failure to aspirate diagnostic amounts of marrow in the face of marked anemia justified the performance of a surgical biopsy of the marrow. The importance of definitely establishing the correct diagnosis in this type of case is quickly recognized when it is seen that leukemia, hypersplenism, and even metastatic carcinoma to the marrow may all give the same type of peripheral blood picture, and yet the therapy of these different lesions varies widely.

Ordinarily when *pernicious anemia* is suspected, a bone marrow examination is not required to establish the diagnosis. A marrow study may aid in a rare atypical case, but this examination should not be performed within several weeks of the use of any of those substances employed in the treatment of pernicious anemia.

Our one case which was first diagnosed as hypersplenism, but which later proved to be myelogenous leukemia may well fall into the group of cases recently reported by Hagen and Watson[7] and by Berlin[2]. They described a group of leukemic patients who developed superimposed *hypersplenism* and hemolytic anemia. Actually some of their patients were benefited by splenectomy, particularly those who gave a relatively long history of an enlarged spleen and whose bone marrows showed erythroid hyperplasia. Our patient gave a history at the time of his first admission of having had an enlarged abdominal mass for two to four years; however, the original bone marrow examination showed depression of the erythroid series. According to the above authors, splenectomy in these patients showing depression of the erythroid series in the marrow offered no benefit.

It was found that usually the examination of the marrow established or excluded the presence of leukemia. In reference to our case with joint pains, it is of interest to note that Bichel[3] recently pointed out that osteoarticular symptoms are not uncommon in childhood leukemia but are very rarely seen in adult cases. These arthralgic symptoms closely mimic those of rheumatic fever, and indeed our case was long regarded as one having rheumatic fever.

The marrow examination is cases having one of the lymphomas does not often lead to the diagnosis, but it is useful primarily in excluding leukemia or some other lesion. Cooper and Watkins[4] found that lymphosarcoma was the most common type of lymphoma that they were able to diagnose by this method. In general most authors[4, 8, 9, 12] agree that there is no specific bone marrow picture in Hodgkin's disease and that this diagnosis cannot be made from bone marrow material unless a paraffin section is made from a focus of actual tumor fortuitously obtained in the marrow aspiration.

The diagnosis of plasma cell myeloma through the bone marrow approach has received careful attention by several groups during the last few years[1, 5, 6]. Most of these authors report the presence of three per cent or more of plasma cells in the marrow in this disease. Without supporting clinical and other laboratory evidence it is hazardous to make the diagnosis of this lesion solely on the finding of as little as three per cent plasma cells in the marrow, especially since there are numerous other conditions which may show some increase in the quantity of plasma cells in the marrow.

The finding of five unsuspected cases of metastatic carcinoma should not come as a surprise, particularly in view of the observations of Street, Funk, and Young[11]. They found metastatic carcinoma in the lumbar spine in thirty-eight and one-half per cent of fifty-two consecutive cases dying with carcinoma or sarcoma. Half of these did not show in the lumbar spine x-ray changes consistent with metastatic tumor. This frequency of unsuspected and radiographically unrecognized metastases to bone is higher than that ordinarily suspected, and should, therefore, more frequently lead to the marrow examination in cases with possible carcinomas. Ulfar and Rundles[13] found tumor in the marrow in seventy-one of one hundred and fifty-two tumor patients. This frequency was sufficiently high to cause them to recommend that bone marrow examinations be done on patients thought to have malignancies before extensive surgery is performed.

In cases of suspected idiopathic thrombocytopenic purpura the marrow must be examined in order to exclude leukemia or replacement of marrow by metastatic tumor or some other aplastic process in which splenectomy certainly would not be the treatment. Furthermore, most hematologists feel that splenectomy should not be performed if there is a reduction of megakaryocytes in the marrow.

One common clinical problem, especially among our group with miscellaneous diagnoses, was the patient with fever of undetermined origin. In such cases the marrow examination may help in ruling in or out diseases such as acute leukemia, lupus erythematosus, carcinomatosis, histoplasmosis, cases of obscure lymphomas with marrow involvement, and certain protozoan infections such as malaria. This is by no means an exhaustive list of causes of obscure fever which produce specific marrow changes. Also, our experiences in this small series admittedly is a limited one, and it does not include a number of other lesions wherein the marrow examination is known to be of decisive help.

It is appropriate to point out that the marrow examination has some limitations, and its performance is not completely devoid of risk. The marrow material, regardless of where it is obtained, represents only a small and not necessarily representative portion of the entire marrow. This means that those lesions which involve the marrow in a patchy character may not be aspirated in the random sample obtained. According to Wintrobe[12] no infections have been reported from the marrow punctures, and hemorrhage is uncommon. We had four cases which continued to bleed from the puncture site for "several minutes" to six days. The two who hemorrhaged the longest required pressure dressings, and one required three sutures. All of these patients had low platelet counts, but a far greater number of other patients with equally low or lower platelet counts had marrow punctures without bleeding. Therefore, we do not believe that a low platelet count is contra-indicative to this examination. The only contra-indication is hemophilia[10]. Ordinarily recent transfusions will not significantly alter the marrow picture although they may mask a correlation between the peripheral blood findings and the marrow picture. Certainly specific medications designed to aid or correct blood dyscrasias should be withheld until the marrow examination is performed.

Summary and Conclusions

An analysis of one hundred consecutive hospitalized patients on whom marrow examinations were performed has been made with a view toward learning those clinical and hematological pictures which would be helped most in establishing the diagnosis by a bone marrow examination. It is found that pancytopenia with, or without atypical cells in the peripheral blood smears, abnormal white blood counts and smears, idiopathic thrombocytopenic purpura, nonleukemic tumor suspected in marrow, and extreme anemia were conditions or diseases which most frequently existed when the marrow examination proved to be of decisive help. Ninety-six per cent of the patients whose marrow examination proved diagnostic had significant changes from normal in their peripheral blood.

The bone marrow examination proved to be of diagnostic value in twenty-five cases, of confirmatory value in fifteen cases, of value in excluding certain lesions from consideration in forty-seven cases, and to be of no help in thirteen cases.

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Discussion

DR. S. FRED STRAIN (Memphis, Tennessee): I have enjoyed Dr. Trumbull's report very much and I am deeply grateful to him for the opportunity he has given me to open the discussion of it. The study of the bone marrow as an aid in diagnosis is a step which, when used with discrimination, is valuable indeed. It is a procedure which must be used with discrimination. It is a relatively simple procedure and there need be no hesitation in employing it when information of either a positive or negative nature is sought.

It must be remembered that the bone marrow constitutes what might be considered an organ, which in its total mass is equivalent in weight to that of the liver. The amount of active marrow varies greatly with age, being much greater in infants than in adults. This important organ is involved in the formation of erythocytes, granulocytes, blood platelets and other formed blood elements. The stages of the developments of these cells can be studied by the examination of the bone marrow and variations from the normal can be readily observed. The activity of the marrow is affected in most of the blood dyscrasias and by a large number of other diseases and intoxications. The correct interpretation of the resultant bone marrow changes enables the clinician to determine the cause of the alterations observed.

The sternum offers a very convenient site for obtaining a specimen, either by aspiration or by trephine. The crest of the ilium and the vertebral spinous processes have also been found satisfactory and are being used as sources of marrow in several clinics. The techniques for obtaining the material are easily learned, and if a few precautions are carefully observed, no harm can come from the procedure.

As has been pointed out by Dr. Trumbull, bone marrow studies are often of great assistance in enabling the clinician to discover metastatic malignancies, multiple myeloma, lupus erythematosis (the L. E. phenomenon), Hodgkin's disease and other disorders which involve the marrow secondarily. The procedure should be employed in all blood dyscrasias which cannot be easily identified by the study of the peripheral blood and other routine laboratory means, and it is often of great value in the study of patients with obscure diseases not readily diagnosed by the usual diagnostic procedures. Splenectomy should never be performed unless it has been shown by the bone marrow studies that the splenomegaly is not due to extra medullary hematopoiesis.

While the techniques of obtaining the specimen either by aspiration or by marrow biopsy are relatively simple, the study of the material obtained and the interpretation of the findings must be made by a well trained pathologist or hematologist. I am grateful for the splendid service I can count on in this regard from Dr. Trumbull and Dr. Diggs and their associates.

STAFF CONFERENCE

The John Gaston Hospital*

DR. C. H. TAYLOR: This 41 year old colored female diabetic was admitted to John Gaston Hospital on March 29, 1952 because of increasing insulin requirement.

Approximately six years prior to admission the patient had been told by a private physician that she had diabetes. She received no dietary or insulin therapy but apparently had remained asymptomatic until September, 1951. At that time she developed a carbuncle on the posterior aspect of the neck and began to notice polyuria, polydipsia and polyphagia. She was admitted to John Gaston Hospital at that time. The carbuncle was incised and drained and the patient was regulated with 50 units of NPH insulin daily.

Following discharge from the hospital, the patient was followed in the Out-Patient Clinic and her diabetes was well controlled with NPH 50 units until December, 1951 when persistent hyperglycemia and glycosuria necessitated increasing the insulin dosage to NPH 60 units daily. From December, 1951 until the time of readmission to the hospital in 1952, the patient was seen at weekly intervals in the Out-Patient Clinic and on each visit the insulin dosage was increased five to ten units because of glycosuria. By March 12, 1952 the patient was taking NPH 140 units plus regular insulin by reaction. In spite of this large dosage, the patient continued to have three to four plus glycosuria. At this point the patient was admitted to John Gaston Hospital. but after several days of hospitalization, the patient signed out against medical advice. Following discharge from the hospital, the patient stopped taking insulin and five days later on March 29, 1952, the patient was readmitted to John Gaston Hospital in a semicomatose condition.

Physical examination at the time of admission revealed a well developed, well nourished colored female with Kussmaul type of respiration. The patient was semicomatose. Temperature was 98.2, pulse 120, respiration 30, and blood pressure 70/?. The lungs were clear, the heart was not remarkable. The liver, kidneys and spleen were not palpable. The patient appeared moderately dehydrated.

Laboratory examination on March 29, 1952 revealed: Hgb. 12 Gm.; hematocrit 36.5 vol. %; WBC 9,450; differential normal; urinalysis negative except for 4 plus glycosuria; blood sugar 490 mg. %; plasma CO_2 combining power 10 vol. % (5 meq/liter); blood serology negative. On March, 31 absolute eosinophil count was 3,960 per cu. mm., on April 3 absolute eosinophil count was 600. On April 23 the BMR was —8 and —17. On April 27 adrenalin eosinophil test initial count was 600, count following adrenalin 200. Radioactive iodine uptake was 25 percent. Chest X-ray was negative. X-rays of the skull revealed a moderate degree of hyperostosis frontalis interna. The skull was otherwise negative.

At the time of admission the patient was semicomatose and was in shock. She was treated with parenteral fluids and large doses of insulin. Approximately 1,250 units of regular insulin was administered during the first 12 hours of hospitalization. The patient responded rapidly and during the first 12 hours, the CO_2 combining power rose from 10 to 52 vol. percent. During the first 2 weeks of hospitalization the insulin requirement continued to increase. During this period of time, the patient had 3 episodes of acidosis. On one of these occasions, 2,500 units of regular insulin during a period of 24 hours were required to bring the patient out of acidosis. She also experienced several rather severe insulin reactions. Except for episodes of acidosis, the patient's insulin requirement rose to a maximum of 1,000 units daily. On April 15 the patient required 500 units of NPH insulin. Since that time, she has shown some tendency to a diminishing insulin requirement. At the present time she is receiving 300 units of NPH insulin each morning. This is supplemented by regular insulin by reaction. She is now receiving in the neighborhood of 350 to 450 units of insulin daily. Except for episodes of insulin reaction and acidosis, the patient has remained relatively asymptomatic. She has been afebrile throughout.

DR. JEAN M. HAWKES: Insulin resistance is considered to exist in a patient who requires over 200 units of insulin a day for diabetic regulation. It is fairly rare, and usually transient, with no cases reported lasting longer than a year at a time, although the condition may recur. The maximum number of units required per day has been reported as 4,000. Fortunately these patients have little tendency to hypoglycemia. Insulin resistance has been reported in nondiabetics receiving shock treatment.

There are a number of logical causes for insulin resistance, but usually none of them is responsible in the really marked case, such as this one. After a discussion of the common causes, which I do not believe are operating in this case as a major factor, I shall mention the more theoretical possibilities.

1. Coma and acidosis are the classical causes of resistance to insulin, and in this case they certainly are important, although I do not believe they are more than contributing factors. In diabetic coma, one sees

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demonstrated the law of diminishing returns, when 100 units of insulin are required to do the work of 10. And after the patient is out of coma, the requirements for insulin daily are higher than normal for that individual, and may remain so for several weeks. Usually though, they are not of the magnitude necessary in this case.

2. Infection is commonly a cause of increased resistance to insulin, but this has been ruled out in this patient. Tuberculosis is perhaps one of the commonest offenders; any pyogenic or virus infection may increase the need for insulin. Again, the increase is not usually of the degree here demonstrated.

3. Endocrine disease may be the etiological factor involved. With thyrotoxicosis the blood sugar is increased from the liver stores and insulin requirements rise. Acromegalic patients, probably because of increased diabetogenic hormone, require larger than normal doses of insulin. Any type of adrenal cortical hyperfunction, whether due to tumor or hyperplasia, or Cortisone administration, raises the necessary insulin dose. In the latter situation, the increased appetite has as much to do with the rise in insulin requirement as the disturbances in carbohydrate metabolism from hormonal causes.

4. In liver disease, abnormalities in the storage and release of glycogen may increase the insulin requirement. Patients with hemochromatosis usually have a progressive but not phenomenal increase in their insulin requirement.

5. Poor absorption of insulin may be responsible for insulin resistance. In severe congestive failure and with edema of the legs, absorption may be considerably delayed. When insulin is injected into one of the "insulin lumps" produced by daily injection in the same spot over a long period, there is marked delay in or almost complete failure of absorption. This is seen fairly often in children, who cherish the indurated lump because it is less sensitive than other parts of their anatomy.

So much for the fairly obvious and often remediable causes of insulin resistance. Less easily demonstrated but often important in cases of insulin resistance are several other factors, one of which I believe is responsible for the problems of the case under discussion today.

1. Insulin is a protein, and the possibility of an immune reaction to it has frequently been suggested. Not infrequently the resistance is associated with generalized allergy to insulin, with the development of urticaria and periorbital edema. Occasionally, but not always, the resistant patient will have positive precipitin tests in the serum. Human insulin is promptly effective in these patients. Insulin resistance can be developed in animals with repeated injections.

2. Hyperglycemic factor, or glycotropic factor, is the name given to a hypothetical substance in the blood of insulin resistant patients. It seems to be an active insulin antagonizing substance in the patients' serum. The blood sugar of rabbits rose, after the intraperitoneal injection of blood from a resistant patient who had been given a large dose of insulin half an hour earlier. This biologic antagonism can also be demonstrated by the protective action of the serum of insulin resistant patients against hypoglycemic doses of insulin in animals. However, the biologic antagonism and the precipitins for insulin cannot often be demonstrated in the same patient.

3. The presence of insulinase somewhere in the tissues has been postulated. In one patient taking 2,000 units of insulin a day, a dose of radioactive insulin caused the Geiger counter to tick at the site of injection long after the doses of other patients had apparently been completely absorbed.

4. The alpha cells of the islets of Langerhans have been held responsible for the production of anti-insulin. The diabetes of an alloxan-diabetic dog, with only the beta cells destroyed, becomes milder after subsequent complete pancreatectomy, indicating that there may be some insulin-inhibitor in the pancreas.

5. Low blood glutathione has been reported by one investigator to be present and important in insulin resistance. This work has not been confirmed but is interesting in view of the fact that glutathione protects against the diabetogenic action of alloxan.

The management of this particular case, as of most without an obvious and specific cause, consists of insulin and perseverance. I have felt that regular insulin four times a day was easier to work with, but have not had a resistant case since the advent of NPH, and this particular patient seems to do equally poorly on both. Other possibilities suggested have been methionine (if one subscribes to the theory that glutathione has something to do with the problem) and desoxycorticosterone acetate, which has been reported to increase the sensitivity to insulin. Since this patient seems to be improving somewhat anyway, I would be in favor of continuing to try stabilization with insulin only, with close supervision to prevent recurrent acidosis or the development of hypoglycemia.

DR. D. B. ZILVERSMIT: In connection with the remarks of Dr. Hawkes on the severity of diabetes in alloxanized dogs, I might say that it takes greater amounts of insulin to control the blood sugar level in these animals. However, when deprived of insulin, these dogs do not show a very marked ketosis as is present in the depancreatized dog when insulin is withdrawn. The fact that the patient under discussion was comatose on different occasions would perhaps speak against the theory that the insulin resistance is due to a relative overproduction of alpha cell hormone.

Dr. Stern has asked me to comment briefly on new developments in the field of experimental diabetes and I would like to mention just two aspects. Work with carbon labeled materials has shown that the diabetic rat is unable to convert glucose or acetate to fatty acid. This failure would explain the accumulation of blood glucose and ketone bodies which are made from acetate. The administration of insulin will restore the ability of the liver to convert glucose and acetate to fatty acid. It is of interest that the previous feeding of fructose will also restore the conversion of acetate to fatty acid to normal.

DR. B. J. GENDEL: I wonder if the basic science people can't help us out in this problem. It seems that relatively simple immunologic techniques might clarify the mechanisms of insulin resistance which are still poorly understood.

DR. R. F. ACKERMAN: A recent paper by Bern and Wallenstein[1] was presented in which they reviewed literature of all cases that had been published which had been studied for insulin neutralizing antibodies. In over two-thirds of the cases no antibodies were found, and they felt that in the ten cases in which such antibodies were found there was a justifiable criticism of the technique.

DR. F. H. MEYERS: The difficulties which have made for the slow progress that Dr. Gendel complains of are best explained by discussing the data on which are based the hints that this situation has an immunologic basis.

Insulin is almost certainly antigenic but so far only weak antisera have been prepared. This appears to me to be due to the fact that the hypoglycemic effect limits the amount of insulin which can be injected, and the amount of antigen injected is an important factor in determining the potency of an antiserum. It takes only one unit of insulin to convulse a rabbit and it takes 24 such units to make one milligram of the purest insulin. A precipitin reaction has never been reported but complement fixing antibodies have been shown to develop. Lowell and Franklin[2] were able to inject larger amounts by first inactivating the insulin with cysteine and four of twenty-four rabbits did become slightly resistant. So far, then, efforts to simulate insulin resistance by immunizing animals have been less than satisfactory.

When the problem is approached differently and an effort made to demonstrate insulin neutralizing substances in the serum of resistant patients, the difficulty is in working quantitatively with the minute amounts of insulin involved. Attempts to demonstrate neutralization of quantities of insulin within the range of the usual bioassay have been unconvincing. Recently, however, the exploitation[3] of a method capable of discerning the presence of 1/20 of a milli-unit has begun. The method involves the preparation and maintenance of rats which are alloxan diabetic, hypophysectomized and adrenalectomized. Not only did the serum of two insulin resistant patients contain insulin neutralizing substances but so did the serum from untreated diabetics.

The administration of insulin led to the disappearance of the insulin antagonist in the latter group. While the work has not been verified it appears to be most careful. The technique is difficult and laborious but surely many groups will adopt it and study not only insulin resistance but the question of the pathogenesis of diabetes as well.

DR. J. W. KYLE: Dr. Lipscomb, could the elevated fasting absolute eosinophil count be attributed to allergy?

DR. ALYS LIPSCOMB: I think that the eosinophil count is consistent with an allergic diathiasis. I have been interested in the correlation between routine 100 WBC differential counts and absolute eosinophil counts.

DR. H. S. TACKET: A recent effort to observe the correlation of eosinophil counts by the direct method and from the differential count on the blood smear has been reported. If a sufficient number of cells are counted on the smear, about 800, there is good correlation between the two methods.[4]

If there is an antigen-antibody reaction involved, would not cortisone be worth trying?

DR. B. J. GENDEL: I would favor trying it. The situation may be somewhat analogous to that in acquired hemolytic anemia in which apparently Cortisone blocks an antigen-antibody reaction that ordinarly is o. k. for the hemolysis. Although Cortisone is said to be contraindicated in patients with diabetes, in a few cases in our experience we have had little difficulty. Of course close observation is necessary.

DR. STERN: Our time is up. I should like to thank those who have participated in the discussion.

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The Care of Hand Injuries: VII Traumatic Amputations, Bull. of the Committee on Trauma of the American College of Surgeons.

Cutting, tearing, or crushing injuries may result in the loss of part of the hand. There are almost invariably open fractures of one or more bones as well as associated injuries of other parts of the hand, the treatment of such traumatic amputations is carried out on the same basis as the treatment of other hand injuries. The end to be achieved is to return maximum function to the best possible hand at the earliest practical date.

Initial First Aid: As described in earlier bulletins should be done with emphasis on retaining all tissue that may be viable. Definitive therapy should not include reamputation initially with associated sacrifice of length of digit. It should include light approximation of partially severed digits with skin sutures, appropriate reduction and splinting of fractures and dislocations, with added pressure dressing. Tetanus toxoid or antitoxin, and antibiotics should be given as needed.

Subsequent Care: The wounds should be dressed as needed in the presence of infection, otherwise they should be left undisturbed for 7-10 days until grafts or initial closures have time to heal. The immobilization of fractures should be continued as described in Bulletin VI. Denuded areas should be covered at the time of the first dressing with appropriate grafts. After healing is complete, further therapy should be designed to (1) restore function by exercise and occupational therapy, (2) reconstruct the hand remnant into the most useful possible pattern, or (3) prepare the stump for prosthesis. (Abstracted by Benjamin F. Byrd, Jr., M.D., Nashville.)

CLINICOPATHOLOGIC CONFERENCE

John Gaston Hospital*

History: F. P., a 42 year old white painter, was first admitted to the John Gaston Hospital in October, 1942, when he presented a characteristic clinical picture of chronic gouty arthritis. He related that his illness began at the age of seventeen years with sudden development of acute inflammation of the right great toe. This was followed two years later by a similar process in the left great toe. In both instances the lesions were incised and crystallin material removed. At the age of about twenty-one years he experienced onset of chronic, recurrent features of the disease, which became steadily progressive in nature. Remissions and exacerbations of articular pain and swelling, tophaceous lesions with spontaneous drainage and ulcerations of the skin, and gradual contractures of the fingers and left knee characterized his course, which at times assumed an almost cyclic pattern.

Associated irregularly with appearance of the lesions were symptoms of nausea, vomiting, fever, chills and occasional short periods of delirium. The patient stated that he would become bed-ridden for a few months until his symptoms abated gradually and he became ambulatory again, only to be forced to take to his bed again several months later when the disease exacerbated. He alleged that he had recovered uric acid crystals from his urine, which frequently had a milky appearance.

Except for minor unrelated illnesses, his past history was not otherwise unusual. There was no definite family history of gout, although a maternal aunt had deforming arthritis of unknown type.

Physical examination revealed positive findings of:—perforated left ear drum; carious teeth with gingivitis; atrophic right testicle; contraction deformities of all fingers and the left knee; reddish-purple discoloration of the skin about the hands, feet, anterior tibial areas of the legs, and knees; raised weeping lesions over the hands, feet, and anterior tibial surfaces; many raised, mobile nodules over the extremities; a few non-tender axillary, epitrochlear, and inguinal lymph nodes.

Laboratory studies revealed a mild anemia, normal WBC count and blood smear, acid urine with specific gravity 1.018, blood uric acid 14.3 mg. %, blood urea nitrogen 25 mg. %, and negative serology for syphilis. Further blood uric acid determinations were 11.4 and 8.6 mg. %. X-ray studies showed marked joint destruction and hypertrophic changes.

The patient remained in the hospital for two weeks and was discharged unimproved. He was next seen in March, 1950, when he was admitted to the hospital for investigation of the effects of cortisone on his disease. At that time, he had been bed-ridden for a few months and was experiencing moderately severe pain. He demonstrated the deformities noted above as well as further deformities of the hands, feet and knees. Scattered tophi were seen with trophic skin changes over many of these and some areas of ulceration of the skin.

Pre-cortisone therapy laboratory studies were extensive and included the following findings:

March 24. Urine—pH 4.5, sp. gr. 1.006, protein a trace, 2 RBC/HPF
Blood—RBC count 3.68 million/cu. mm.; Hgb. 12 Gm.; WBC count 12,200/cu.mm.; PCV 34 vols. %; sed. rate 1.5 mm./min. (corrected); blood smear not unusual except for 80 per cent polys and 13 per cent lymphocytes.
March 25. Smear from tophus of ear showed sodium biurate crystals. PSP— 30% total excretion.
March 26. Urine conc. test 1.011 maximum sp. gr.; blood uric acid 8.8 mg. %; blood NPN 74 mg. %; total serum proteins 6.3 Gm. % with an A/G ratio of 4.6/1.7.
March 29. Serum alkaline phosphatase 2.3 units; serum calcium 9.6 mg. per cent.
March 30. BUN 47 mg. %; urea clearance (1) 21 cc./min. and (2) 19 cc./min.
April 4. Renal hemodynamics: renal plasma flow 24.7 per cent of normal; glomerular filtration rate 22.3 per cent of normal; and maximal tubular excretory capacity 22.9 per cent of normal.
April 10. Blood: fasting sugar 100 mg. %; NPN 98 mg. %; uric acid 9.0 mg. %; TSP 5.7 Gm. % with an A/G ratio of 4.0/1.7.
April 12. 24 hr. urine: volume 1820 cc.; creatinine 1.12 Gm./24 hrs.; uric acid 0.67 Gm./24 hrs.

Urological investigation further revealed evidence of a mild cystotrigonitis. Retrograde pyelograms were normal, but I.V. pyelograms showed inadequate filling. Skeletal survey by X-ray demonstrated changes characteristic of gouty arthritis.

Administration of Cortisone was begun April 14, 1950 and continued for approximately 3 months, relatively large doses being given for 2 months followed by a gradual reduction to cessation over the last month. The patient claimed that he experienced relief of pain within 2 hours after the first injection (300 mg.). Thereafter symptoms and signs gradually improved, chiefly there was increased mobility of all joints. He became ambulatory on the seventh day of "treatment."

A multitude of laboratory determinations, the results of which occupy eighteen pages of the hospital record, were done during the remainder of his hospital course. A summary of some of these observations revealed that: (1) the sedimentation rate gradually fell to a low of 0.4 mm./min. (corrected) during the second month of Cortisone administration, rising slowly thereafter; (2) the RBC count, Hgb., and WBC counts showed insignificant changes, a mild anemia and leucocytosis persisting; (3) the blood NPN reached a low of 50 mg. % shortly after Cortisone was discontinued; (4) the blood uric acid reached a low of 6.9 mg. %, the majority of determinations falling between 7 and 9 mg. %; (5) all urinalyses showed features of acidity, sp. gr. less than 1.010, 1 plus to 4 plus proteinuria and occasional RBC/HPF; (6) 24 hour urine specimens, taken almost daily, showed fluctuations of creatinine and uric acid with general decrease to lows of 0.86 and 0.13 Gm./24 hours, respectively, during Cortisone administration.

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Cortisone was discontinued on July 7, 1950, and the patient experienced return of mild pain three days later. However, he remained ambulatory and was very cheerful and cooperative at all times.

Postcortisone studies included the following:

July 24, 1950—Renal hemodynamics: renal plasma flow 20 per cent of normal; glomerular filtration rate 21 per cent of normal; and maximal tubular excretory capacity 20 per cent of normal, July 27—PSP of less than 10% excretion in all specimens. July 29—Urine concentration test—maximum sp. gr. 1.010.

The patient was given increasing doses of colchicine to toxicity on August 1, 1950 without relief of his pain. He was discharged five days later, ambulatory and having only minor symptoms.

Follow-up observations in the OPD from August to December, 1950, elicited little change in the patient's general condition. He remained ambulatory and cheerful, complaining only of intermittent articular pain and stiffness. Spontaneous drainage of small ulcerative lesions about tophi, especially of the fingers, occurred intermittently. Laboratory studies during this period revealed the following values: blood NPN—62, 57, and 80 mg. %; blood uric acid—7.4, 8.7, 8.4, and 7.2 mg. %; PCV —28, 30 and 30 vols. %; sed. rate—1.1, 1.6, 3.3 mm./min. maximal fall; urine—2 plus protein, occasional RBC/HPF.

Due to his plans for an out-of-state trip to visit relatives for several months, the patient was discharged from the Clinic in December, 1950.

He was next seen in October, 1951, when he was admitted to the hospital for Cortisone therapy at his request. He was not ambulatory but experiencing moderate to severe pain. He was given a short course of Cortisone with prompt relief of pain. Laboratory investigation yielded the following. Blood: PCV 36 and 30 vols. %; RBC count 3.18 and 3.4 million per cu. mm.; Hgb. 11.5 and 10.6 Gm.; MCV 116 and 113 cu. microns; MCH 37 and 32 micromicrograms; MCHC 32 and 35.4 %; color index 1.2; WBC count 25,150 and 22,400 per cu. mm.; large RBC, hyperlobulated polys, and shift left in neutrophils on smear; sed. rate 62 mm./hr. total fall. Urine: pH 4.5, sp. gr. 1.008, 3 plus protein, occasional RBC and granular cast per HPF. Blood: NPN 132 mg. %; creatinine 4.2 mg. %, uric acid 11.4 mg. %. PSP test showed less than 20 % total excretion. Because of the findings of macrocytic anemia, gastric analysis was done. Specimens were negative for free HCl until 40 minutes after histamine, when 2 degrees of free acid were noted, with a total of 3 degrees. Bone marrow aspiration disclosed findings which were not diagnostic. A plain film of the abdomen was not unusual except for marked calcification of the internal iliac vessels. The patient was discharged on the 24th hospital day, symptomatically improved and quite jovial.

On March 1, 1952, he was admitted to the hospital for the last time. Little was known of his course since the last period of hospitalization. However, informants stated that for several weeks he had been unable to retain food or fluids and had had a severe diarrhea. On admission he was disoriented. The skin was cold and revealed evidence of marked dehydration. Blood pressure was 90/60, and temperature 95 degrees F. Laboratory study done showed PCV 25 vols. %, buffy coat of 3 mm., shift to left in neutrophils with hyperlobulated polys on blood smear.

The patient's condition steadily deteriorated during the next two days. Temperature rose to 100-101 degrees F., and blood pressure gradually dropped, in spite of more than 1,000 cc. whole blood transfused on the second day. He failed to respond to further intravenous fluids, intravenous and intramuscular stimulants, and other measures. He expired on the morning of the third hospital day. Reports of final blood chemistry done on the second day were: NPN 153 mg. %, creatinine 6 mg. %, and chlorides 693 mg. per cent.

DR. BENJAMIN R. GENDEL: The differential diagnosis is of lesser significance here because I believe that the diagnosis is obvious—the patient had gout. I believe that more can be gained by discussing some of the important aspects of this disease in relation to this patient. To begin with, the patient was a male and this is consistent with the fact that over 90 per cent of the cases are males. Gout is a disease of the older male, over 40 years of age, and this patient was 42 years of age. However, it is noteworthy that his disease began at the age of 17 which is unusual. When gout does have its onset at this young age, it is indicative of a poor prognosis. It is axiomatic that the younger the patient at the onset of gout, the more severe is the disease and this was borne out in this case. Another point which might be mentioned is that the patient was a painter. In the United States little stress is laid on the occupation of patients with gout. In the older reports from England the association of gout with painters and exposure to lead was often mentioned. However, the onset of the disease in this patient was at the age of seventeen, probably before he became a painter. We note that the disease began as a sudden inflammation of the right great toe, starting at 2:00 or 3:00 A.M. An onset of this type in the early morning hours is characteristic of gout. The pain rapidly increases in severity with a crescendo quality in contrast to the slower development of rheumatoid arthritis. The foot was described as red and purple in color. In contrast to this, the joint of rheumatoid arthritis is usually white or bluish-white and without inflammatory appearance. The initial process was considered to be a cellulitis and an incision and drainage was done but no suppuration was observed. This is often the initial history in gout, an interpretation that cellulitis is probably present. This patient had tophi which occur in over fifty per cent of the cases of gout and may occur on the ears, olecranon bursae, hands and feet as they did in this patient. I must confess that I saw this patient last October and as I recall he had tophi widely disseminated over his body. In fact, it looked as though his tophi had tophi. In some cases, tophi may occur in the internal organs such as the heart, but this is a great rarity.

The patient had chills and fever and a short period of delirium. Constitutional symptoms are generally absent or mild. In an occasional instance there may be chills and fever simulating a suppurative arthritis. Uric acid calculi occur in about 10 to 20 per cent of patients with gout and in some cases stones may be passed. We may suspect that the cloudy urine might have been related to the passage of uric acid. The cloudy urine could have represented sand or calculi or the presence of these could have resulted in secondary infection of the urinary tract.

This patient did not have a family history of gout. Only 10 to 20 per cent of cases in this country show a positive family history. In contrast, in England 22 to 81 per cent of cases show a positive family history. Recent studies have shown a significant incidence of asymptomatic hyperuricemia in relatives of gouty patients. It is then of some practical importance to examine other members of the family of patients with gout as a case-finding method. The X-ray examination showed evidence of wide spread involvement, involving even the sacro-iliac joints. It is the opinion of many authorities that gout spares the sacro-iliac joints and that if these joints are involved the patient has concomitant rheumatoid spondylitis. We must remember that rheumatoid arthritis may occur with gout, concomitantly.

There is little doubt that the lesions in the ears and elsewhere are tophi, not only from the gross appearance but by the confirmation of finding sodium biurate crystals microscopically. The existence of a tophus may be confirmed either by the finding of these crystals obtained by scraping the lesion or by a positive murexide test. In questionable instances this must be done occasionally. It is interesting that we have seen one case referred because of a tophus on the ear. It actually proved to be a basal cell carcinoma. The biurate crystals are fine, needle-like structures and may be obtained by scraping the suspected lesion. They give a positive murexide reaction.

The patient was treated with Cortisone with some relief of pain and reduction of the sedimentation rate accompanied by other evidences of improvement. Since gout is a recurrent disease, this might have been coincidental but it is probable that the patient actually had some improvement on Cortisone.

In 1950 the patient was found to have a macrocytic anemia with increased MCH and MCV of 113 to 116 cubic micra. The question arises as to whether the patient also had pernicious anemia. The gastric analysis showed 2 or 3 of free HCl. The amount was so small that one wonders about it. The presence of free HCl for all practical purposes would rule out the diagnosis of pernicious anemia. The leucocyte count was 25,000 which is unusual for pernicious anemia. The hyperlobulated polymorphonuclear cells do occur in pernicious anemia, but they are not specific. The bone marrow was "not diagnostic" and this argues against pernicious anemia. However, one cannot be positive about pernicious anemia in this case without an actual assay for intrinsic factor which was not done. The anemia might be attributed to the azotemia but usually a normocytic or microcytic anemia results. The anemia of uremia is of complex etiologic nature and may be attributed to the achlorhydria which is common, the inanition from anorexia, nausea and vomiting and the long continued blood loss from hematuria. Some attribute it to a toxic depression of the bone marrow. It is possible that the anemia might have been due to a combination of uremia and nutritional deficiency.

We now come to the problem of the relation of gout to the renal disease. This relationship has been known since antiquity. Urates are deposited in the renal cortex and medulla and with the resulting interstitial nephritis one is apt to find hypertensive cardiovascular disease. In many cases there is superimposed pyelonephritis. We also note that X-ray studies showed arteriosclerosis of the iliac and pelvic vessels in this 42-year-old man. Patients who develop gout especially early in life as this man, are biologically much older than their chronologic age and one may see premature arteriosclerosis, as was the case here.

Dr. Gendel's diagnoses:

1. Chronic gouty arthritis with tophi
2. Chronic interstitial nephritis secondary to gout
3. Anemia secondary to:
   a. Uremia
   b. Nutritional deficiency

DR. R. P. HENDERSON *(Discussion of X-ray Findings)*

This case represents a very classical one of far-advanced chronic gouty arthritis, with its late sequellae and complications. The findings of calcium urate crystals in the joints, periarticular tissues and synovial membranes are pathognomonic of gout. These X-rays show a marked amount of calcium urate crystals within and surrounding every peripheral joint. The bursae are all filled with these crystals. There are also deposits noted in the subcutaneous tissues of the forearm. The bone and joint changes are due to the urate crystals being deposited within and around the joint. The tophi, which are localized collections of the crystals, cause bone destruction by pressure necrosis. The cartilage of the joint is destroyed because of the structural weakness of the cartilage when infiltrated with the urate crystals. The subarticular bone is then damaged when the protection of the cartilage is gone. This causes subarticular cystic changes, fibrous and bony ankylosis. You will note in these X-rays that the hands and feet show a marked flexion deformity and the carpals and tarsals show a bony ankylosis. The metacarpal phalangeal and interphalangeal joints show a marked amount of destruction of the joints and the feet show a like process.

Of unusual interest in this case is the subarticular bone destruction of the sacroiliacs which could not be differentiated from rheumatoid arthritis on the X-ray examinations. Another finding of interest is the complete destruction of the ungual tuft of the right great toe. This phenomena is that seen in peripheral vascular constricting diseases and it may be a feasible explanation that the marked involvement of the metatarsophalangeal joint with its associated soft-tissue involvement is enough to cause the vascular constriction. However, it is seen that this patient also has a marked amount of calcification in the peripheral arteries, which is very uncommon in a patient in this age group.

The differential diagnosis would include both a rheumatoid arthritis, and occasionally an osteo-arthritis. Of course, neither of these conditions have the calcium urate deposits surrounding the joints and in the soft tissues. You will also notice that these bones show no evidence of osteoporosis, which is generally seen with rheumatoid arthritis. Furthermore, gout generally causes a generalized subarticular bone destruction of the whole joint, while rheumatoid arthritis has more of a tendency to cause a marginal subarticular bone destruction. In osteo-arthritis there is a destruction of the cartilage, and with this a wear-and-tear process which causes the sclerosis and osteophytic lipping so frequently seen. Gout is very similar to this in that there is a destruction of the cartilage, but in gout the changes are much more severe and there is a tendency toward a more widespread involvement. In gout, the destruction is more complete without as much sclerosis. Therefore, the X-ray opinion is that of a chronic gouty arthritis.

DR. RUSSELL S. JONES, M.D. *(Discussion of Pathologic Findings)*

Pathologic diagnoses:

I. Grouty arthritis with—a. Extensive tophi, b. Deformities of hands and feet, c. Deposition of urate crystals in the kidney

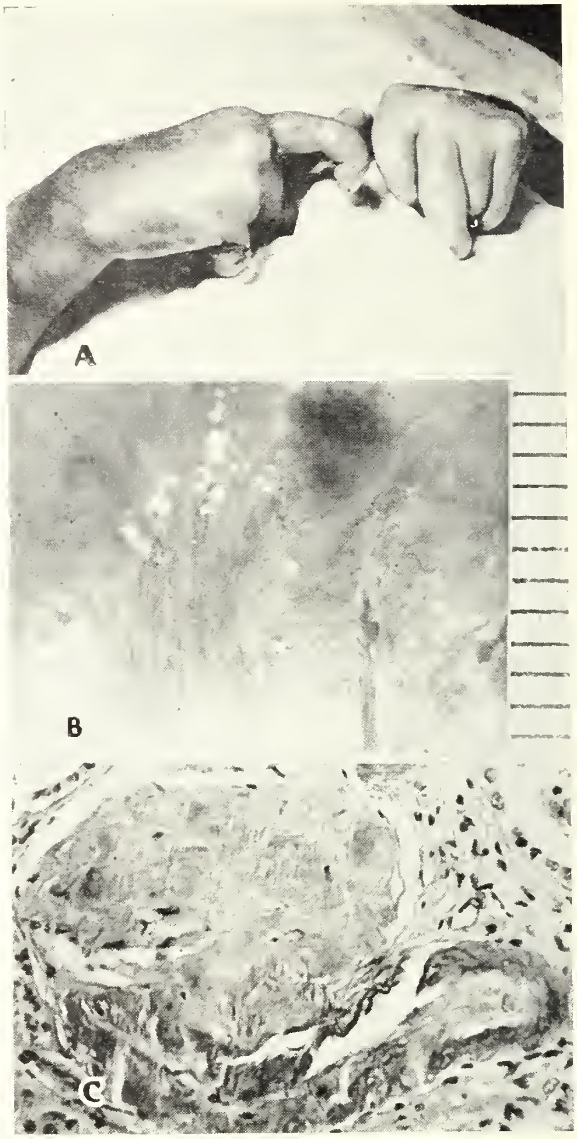
II. Amyloidosis of the spleen, adrenals and kidney, and small vessels of liver, pancreas and urinary bladder

III. Generalized atherosclerosis.

The outstanding feature of this case is the unusual association of gout with amyloidosis. The gout is of many years' duration and most severe. It has produced contractures and deformities of the hands and feet; there are areas of ulceration associated with the tophi about the knees, wrists, and ankles. Dr. Henderson has already reviewed the areas in which the lesions have occurred. At autopsy we see readily the tophi or urate deposits with their chalky gross appearance about the sternoclavicular joints, the shoulder joints and even about the vertebra. Microscopically, these deposits of crystalline urates are often surrounded by macrophages, giant cells and fibrous tissue.

The exact pathogenesis of gout is unknown. Apparently the uric acid is derived from the break-down of nuclear protein or purines, and the excess of urates in gouty subjects has been thought to be due to the faulty excretion or the diminished destruction of urates. Other theories include the abnormal renal insensitivity to urates, some type of allergic reaction to proteins, or some disturbance in the pituitary-adrenal axis. Gouty patients have four to fifteen times the quantity of uric acid available for circulation, or as it is termed, "in the miscible pool." Benedict, Forsham, and Stetten, using isotopic uric acid, found that there was an inter-change of the urates into and from their sites of deposit in tophi; the urates may be taken up from a deposit and later redeposited.

The gouty nephritis has been stated to occur in from ten to thirty per cent of the cases. Renal failure and death may result therefrom. The primary renal damage is attributed to the associated arteriosclerosis rather than to the obstruction of the renal tubules by the urates. The stasis in the tubules obstructed by the crystals and by scarred renal parenchyma predisposes to pyelonephritis. In our case we do have evidence of urate deposition in the kidneys. About the groups of crystals are giant cells and some chronic inflammation in the adjoining interstitial tissue. The latter can-



A. The contracture-deformities of the hands are associated with a few small tophi and one area of ulceration.
B. The juncture of the cortex with the pyramid presents many refractile urate crystals seen as the lighter areas. The parallel medullary markings are quite distinct. (Each of the divisions of the ruler represents 1 millimeter.)
C. High-power view of the hyalinized renal glomerulus and one of its arterioles shows the amyloid material by its darker shade (from a Congo Red stain.) This suggests that the amyloid preceded the hyalinization.

not be ascribed to a subacute or chronic pyelonephritis. The pelves and the calices of the kidney are free of inflammation. The kidneys are reduced in size, weighing about 90 grams each. The cortex varies in thickness, and shows a considerable reduction in the usual markings, with a yellow, mottled appearance. In contrast to the cortex, the medullary markings are rather distinct. At the medullary-cortical juncture the little yellowish crystalline structures are quite numerous. The marked scarring of the renal cortex is due to fibrosis and amyloidosis. The amyloid not only involves the larger vessels but also is noted extensively in the arterioles and in the glomeruli. One wonders whether or not there might have been some antecedent scarring prior to the amyloidosis or whether the amyloidosis involving vessels could have led to hyalinization in the areas which they supplied. By use of the congo red stain one may see that considerable amyloid is present, even in the old hyalinized glomeruli of markedly reduced size. This suggests, therefore, that the amyloid process has at least occurred during the time of the scarring and is not a secondary deposit in the areas of fibrosis. The involvement of arterioles, veins, and arteries is fairly common in amyloidosis and the association of hyaline scarring about amyloid deposits in the glomeruli is attributed to the effects of decreased blood supply. Many of the remaining glomeruli which are not scarred show the various stages of the deposition of amyloid about their capillary loops.

The amyloidosis can be classified as parenchymatous, or of a secondary type. It involves the spleen, which weighs 550 Gm. and is very firm and cartilagenous in consistency. Microscopically, amyloid almost completely obscures all the pre-existing structures except the larger vessels and a few remnants of Malphigan bodies. Considerable amyloid is noted in the adrenal, where it involves vessels, but is especially prominent about the cortical sinusoids. There is atrophy and complete disappearance of many of the cortical cells. The liver is entirely free of amyloid except for involvement of the small arteries and arterioles. There is some amyloid also about the smooth muscle of the urinary bladder and in the smaller vessels of this region. The pancreas is unaltered except for the amyloidosis of the smaller arteries and arterioles.

To explain the way in which the gout might lead to amyloidosis is almost as difficult as explaining the gout itself. There is no known association between gout and amyloidosis such as there is between chronic infections or rheumatoid arthritis and amyloidosis. There is, however, an association between gout and rheumatoid arthritis, and perhaps we may have an indirect relationship between gout and amyloidosis It is also possible that the therapeutic procedures may have an additional influence, giving rise to new associations and relationships. Cortisone might be implicated, since it does effect connective tissue metabolism, but clinically there is much to suggest that the amyloidosis may have preceded the actual administration of Cortisone; while there was only a trace of protein in the urine prior to his Cortisone therapy, the maximum specific gravity on a urine concentration test was 1.011, the blood NPN was 74 mg. per cent, and the renal plasma flow, glomerular filtration and maximal tubular excretory capacity were all reduced. It has been stated that as amyloid is being deposited, the previous hyperglobulinemia may return to normal limits; otherwise, the lack of an elevated globulin and of any appreciable albuminuria is somewhat against amyloidosis being present in 1950. The microsections show amyloid in the central portion of hyalinization in glomeruli, indicating the amyloid was present prior to the scarring and is the primary cause of the renal insufficiency. It is of interest that during the hospitalization the NPN reached a low of 50 mg. per cent shortly after the Cortisone was discontinued, suggesting that there might have been some renal improvement during this time, instead of an advance of the amyloidosis. From this time on we have evidences of more protein in the urine and of increasing anemia. We note that terminally his blood pressure was 90/60, temperature 95 F, and that he was disoriented and had a severe diarrhea. It would seem that his death is actually due to a number of factors, arising from the gout and amyloid nephrosis, such as the increasing NPN, disturbances in the acid base balance, and the anemia.

DR. FRANK TULLIS: In the few remaining moments, I wonder if Dr. Gendel would like to discuss some additional clinical aspects. I think the treatment of gout is pertinent.

DR. B. GENDEL: My discussion thus far has dealt with a severe case of chronic gouty arthritis. I have not covered the more common clinical problem of the milder case. From the standpoint of treatment it is necessary to divide gout into several stages. We might divide the stages of gout into the acute episode, the interval stage and the chronic gouty arthritis. In the acute episode, bed rest will be necessary, but the patient will be in such pain that he will be in bed in any case. A low purine diet should be instituted. Of the drugs, the old reliable colchicine is very effective. It is administered in a dose of 0.5 mg. every hour until the patient obtains relief or until the patient develops toxicity with nausea, vomiting, and diarrhea. About 10 to 14 doses are usually required for relief, but this is quite variable, and some may need an extraordinary amount. A good response is obtained in 95 per cent of the cases. More recently, ACTH and Cortisone have been used and much emphasis is on these drugs at present. ACTH is often effective but at times proves ineffectual. One hundred to two hundred milligrams is usually given in divided doses. When given alone, the acute gout is usually relieved promptly but there is a relapse in 72 to 96 hours. This may be obviated by concomitant administration of colchicine. My experience with Cortisone has been limited and my first choice would be colchicine and then ACTH combined with colchicine.

Benemid, a uric acid-excreting drug, is being investigated at present, and it is hoped that it will live up to the present expectations. The English workers consider it the best uricosuric drug. It is even stated to mobilize the uric acid in tophi, decreasing their size. Incidentally, salicylates also increase the excretion of urates, but do very little actual good in gout from a curative point of view. In chronic cases it may be advisable to remove the more painful tophi surgically, and surgery also has some application in prevention of deformities, to treat some of the discharging, ulcerating masses, or for cosmetic reasons.

Therapy is directed toward prevention of attacks between acute episodes. A more liberal low purine diet is beneficial. Colchicine or some uricosuric drug, such as a salicylate, 0.6 Gm. three times daily given two to three times per week, may be used. The selection of the drug for the interval case is a matter of personal preference.

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The President's Page

THE UNSELFISH APPROACH TO THE VETERAN'S PROBLEM

Dr. Smith

Dr. Harrison H. Shoulders believes that the world belongs to the discontent. He symbolizes the scientific man who is never satisfied with results of the moment, the man who knows that more can be accomplished; the man who is determined to help with that accomplishment.

This page of this issue will be devoted to a determined fight Dr. Shoulders has waged, almost alone at some stages, to improve medical care for the veteran, and to stave off federal encroachment on civilian medical care of veterans. His approach to the problem has been one of the few which were devoid of any selfishness, devoid of any arguments slanted toward the profession. His interest has been for the veteran first, for civilian hospital care second, for the taxpayers third, and for the medical profession last.

Dr. Shoulders began this fight many, many years ago, in 1931. He has never let go, and he never will, until the cause is won. Because he believes in a principle, he has lost friends. But now, with victory in sight, some of his bitter enemies in the fight are becoming his friends. It must be a deep satisfaction for a man to convince an enemy of the moral right of his cause. This, Harrison Shoulders has done.

The veteran leader of organized medicine—nine years Speaker of the House of the AMA and its President in 1946-47—has long been disturbed by the Veterans Administration system of caring for ex-servicemen in their time of medical need.

To recount the progress made in the fight for The Tennessee Resolution before half a dozen conventions of the AMA would be superfluous. Physicians of the entire nation, much less those of Tennessee, know the painful progress Dr. Shoulders has carved toward the goal. He is hopeful of a final victory in the December session of the AMA at Denver.

Dr. Shoulders says the biggest opposition he has encountered is within the profession at the national level. He says we are a "house divided" on this vital issue. This, we firmly believe to be true. We would like to ask this question: Why have certain leaders of organized medicine given lip service to the fight against Socialized Medicine and at the same time compromised the profession in the matter of VA competition with private hospitals and VA mismanagement of veterans' medical benefits? Dr. Shoulders knows the answer to that question and he has been persistently broadcasting that answer to all, so that those with consciences would hear—and act.

This message, then, is a belated tribute to a man of medicine who challenges us all in one sentence which he wrote in one of his appeals on this problem. That sentence was: "We can, in honor fail to succeed. We cannot, in honor, fail to try."

Daugh W. Smith

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JULY, 1952

EDITORIAL

POISONING BY IRON

From our medical school days we have been under the impression that iron salts are innocuous and have given no thought to caution patients concerning their disposal in the household. So it may come as a shock to learn that iron salts are not without danger to young children. The curious fact about the matter is that a drug used for generations was not suspected of being hazardous until only five years ago. Fatal poisoning in children in the past may have masqueraded as other more common clinical entities, such as infectious diarrheas for example.

It was in 1947 that attention was first called to the possibility of toxicity of ferrous sulphate to children. The first reports of iron poisoning both fatal and non-fatal appeared in the medical literature in Great Britain. Since then cases of intoxication have been reported from Sweden and a number of instances from the United States. At the time an editorial* appeared in the Journal of Pediatrics in January of this year, eight fatal and eight non-fatal cases had been reported in the literature. In the same issue appeared two reports on the subject.

It could not be determined in any case just how many tablets containing ferrous sulphate had been ingested by the children who had been poisoned, because vomiting has certainly emptied out some of the iron. Most children have been from 18 to 30 months of age and thus have not been able to give any historical facts.

The main pathologic findings are edema, hemorrhage and superficial necrosis of the mucosa of the stomach and like areas even to gangrene in the small bowel. Thrombosis of vessels in the small bowel are present. Central necrosis of the liver is no doubt secondary to the changes in the gastro-intestinal tract since analyses for iron have shown no abnormal amounts in the liver or kidneys. It has not been shown to be transported beyond the mesenteric lymph nodes. Congestion and edema of the lungs have occurred.

The clinical picture based on such pathologic findings is then one of vomiting of blood, bloody or tarry stools, shock and coma. Symptoms come on from one to several hours after ingestion and death has occurred in from twelve to seventy-two hours, the late deaths being due to pneumonia. Treatment is directed to combat shock, with the use of plasma and saline and glucose infusions.

One cannot help but comment that on the basis of these pathologic findings, we have the answer to the gastro-intestinal irritation encountered at times in adults taking therapeutic doses of ferrous sulphate.

The point of this editorial is that when we prescribe the sweet, pink or chocolate coated tablets of iron for some adult in a family with young children, an appropriate warning go with the prescription that the tablets be kept out of reach of children. The editorial written for the Journal of Pediatrics also points to the hazards of a growing custom of handing out such tablets to donors at blood banks after the donation of blood. Envelopes containing the medication should carry a warning regarding toxicity for children.

R. H. K.

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*Editorial, Iron Poisoning, J. Ped. 40:141, 1952.

An Open Letter to All Members

Dear Doctor:

Medical science has advanced to such a point that the ravages of many illnesses and injuries can be alleviated materially by effective treatment. Commonly that treatment requires the facilities of a modern hospital.

It seems clear that every Tennessean should receive the benefit of hospitalization and effective treatment for acute illnesses and injuries when it is obvious that such treatment can help him materially, regardless of whether he can, at the time, meet the full cost of that care.

The General Hospitals of the state provide a considerable amount of such care to some citizens who are not able to meet its full cost. The method by which they do this is to raise their charges to those patients who can pay their bills. This source of income is limited, however, so the General Hospitals are able to care for only a portion of those indigent citizens who need care.

Many citizens of the state live in sections in which there are no fully equipped general hospitals, and in most sections there is no provision for paying the cost of hospitalizing the indigent sick who must go to hospitals outside their own community.

The medical profession has a social responsibility to care for the sick and injured and it makes a strenuous effort to discharge this responsibility regardless of whether the patient is able to pay for the care he needs or not. The medical profession, however, is powerless to pay the hospital bills for indigent patients, although effective treatment for many conditions requires the facilities of a modern hospital.

The obligation of providing for the indigent is clearly an obligation of the State. By custom some aspects of providing for the indigent are delegated to the counties and cities and private philanthropy provides for other aspects. Neither of these facts diminishes the responsibility of the State and since no man is obligated to continue his philanthropic acts.

At the present time the State makes some provision for specialized hospitalization, such as Tuberculosis hospitals, hospitals for Mental Illnesses, for Crippled Children and for the rehabilitation of certain citizens. The state makes no provision for General Hospital care for acute illness and injuries.

To meet the needs of the acutely ill and injured for definitive treatment in General Hospitals, the medical profession has proposed and is fully committed to a seven point program.

(1) The members of the medical profession will provide the professional care the indigent patients need without cost to the State. They always have.

(2) The State will accept its moral and legal responsibility for the hospitalization of the indigent sick and injured by establishing a program for paying the full cost of that hospital care, exclusive of physicians' fees.

(3) Since counties and cities were created and are controlled by the State, the State laws will be adjusted to the end that the counties and cities participate in an equitable manner in meeting the cost of this program and administering the determination of eligibility.

(4) Determination of both medical and financial eligibility will be made locally, according to procedures developed by the State.

(5) The principle of medical eligibility will be that the patient is suffering from an acute illness or injury that can be materially helped by definitive treatment in a modern hospital.

(6) The principle of financial eligibility will be that the patient is clearly unable, from his own resources or those upon whom he is legally dependent, to meet the full cost of the hospitalization he clearly needs.

(7) The patients will be hospitalized in whatever hospitals in the State have facilities and staff to provide the particular definitive treatment needed, regardless of whether they are located in the county of residence of the patient or to the type of ownership of the hospital.

The issue is clear. Should Tennesseans have to accept suffering, disability and death that can clearly be prevented by definitive treatment simply because, at the time, they are unable to meet the full cost of that treatment?

The members of the medical profession are convinced that the answer to that question should be an unequivocal NO. The practical alternative which the medical profession proposes is for the medical profession to supply the treatment these less fortunate Tennesseans need without cost to the State, and for the citizens, through the agency of the State, to meet the full cost of their hospitalization.

This program will accomplish a number of things. Among the more important are: (a) it will make it possible to relieve much suffering, disability and death, (b) it will give a measure of medical security to all the citizens of the State, since any man may fall upon hard times, and (c) it will reduce somewhat the high cost of hospitalization to self-sufficient citizens, since they will be relieved of the burden they have been carrying for their less fortunate fellow-citizens.

The Tennessee State Medical Association is convinced that no candidate for public office deserves the support of the people if he is unwilling to give his enthusiastic support to this program.

Your Public Service Committee urges you to personally contact candidates for the legislature from your own area and obtain from them a commitment, in writing if possible, to the general proposition of an annual state appropriation for State-County financing of this humanitarian project. Also contact your County Court Judges and urge them to participate in the program, once it passes the legislature. Please send to me any written commitments and let me have your personal reactions to this proposal.

Best wishes and kind regards,

L. W. Edwards, M.D., Chmn.
Public Service Committee

DOCTORS **ARE** CITIZENS

Healing the human body requires your skill

Healing the body politic requires your will

YOUR VOTE IS VITAL

Be Sure You and Your Family Are Registered

BE SURE YOU

VOTE!

Please return the post cards sent out by the survey of your

PUBLIC SERVICE COMMITTEE

Just One Vote . . .

Frequently, you hear this question: "What good will one vote do?" Well, one vote had a lot to do with a lot of things in this country!

Thomas Jefferson was elected president by one vote in the electoral college.

So was John Quincy Adams.

Rutherford B. Hayes was elected president by one vote. His election was contested, and it was referred to an electoral college. Again he won by a single vote.

The man who cast that deciding vote for President Hayes was a congressman from Indiana, a lawyer who was elected to congress by a margin of just one vote; and that one vote was cast by a client of his, who, though desperately ill, insisted upon being taken to the polls.

Just one vote gave statehood to California, Idaho, Oregon, Texas and Washington.

Pause for a moment—by just one vote there came into the nation the states of California, Idaho, Oregon, Texas and Washington. That's a big chunk of territory and, today, all the millions living in those states are Americans by just one vote.

Now, you may say that the one vote situation applies to the past. Well, don't forget that the draft act of World War II passed the house by just one vote. You can carry this one vote history on and on.

For example, one more additional Democratic vote in each of Ohio's 8,800 precincts in 1944 would have defeated Mr. Taft. In 1948, one more additional Republican vote in each of the 8,800 precincts would have carried the state for Mr. Dewey instead of Mr. Truman.

"The sum total of the common sense of the common people is the greatest and soundest force on earth."—Thomas Jefferson.

PUBLIC SERVICE COMMITTEE
TENNESSEE STATE MEDICAL ASSOCIATION

ORGANIZED MEDICINE—1952

Dr. Louis Bauer's addresses as appear in this issue and in the J.A.M.A. pose the socioeconomic problems which face the medical profession. They are not new, but they should be more sharply outlined in the minds of all of us this year—the year in which he who votes will commit himself to favoring a policy of progressive Socialism or a policy maintaining a modicum of freedom in individual endeavor.

The American Medical Association has come in for a lot of criticism and may be slated for still more vilification before the year is up. Many of us may disagree with certain actions of the Association just as we as citizens may disagree with our government. For the greater good in democracy we abide by the will of the majority. And when some of our members speak disparagingly of the Association as the "union," let us remind them along with Dr. Bauer of the half century fight of the American Medical Association to elevate the standards of medical education and hospital practice and house staff training. Let us also remind them and the laiety of the constant warfare on the patent medicine industry and upon quackery, setting the standards for drugs, nutrition, cosmetics, industrial health and the like, thereby limiting the hazards to health for millions of our population daily. (Yes, these would have happened eventually through Federal edict. But the Association as a free agent could move rapidly without backing and filling because of political pressure groups.)

Curiously enough, as Dr. Bauer implies, the American Medical Association has been labelled as reactionary because at one time it opposed, or moved slowly in the field of voluntary health insurance and now sponsors it whole-heartedly. Does not this represent the same thinking that prompts us to demand adequate evaluation of an antibiotic, hypotensive drugs, or isonicotinic acid hydraside before applying their use on a large scale? So too organized medicine has recognized for decades the need for, and has cooperated in the activities of public health activities for the collective good of the community—those medical activities which are not basically personal.

There are always a few selfish individuals in every group. It is these who can undermine our structure so it will fall to be replaced by something new and jerry-built—by government—which would most certainly be just as rickety, in terms of good medical care, as similar schemes elsewhere on the globe. There are a few among us who do not cooperate in the Tennessee Plan because the fees may seem to be not quite what they should be. Voluntary health insurance at least keeps the fees within the control of the profession; the other alternative is a governmental fee schedule already partially effected through the Wage Stabilization Board. The physician uncooperative in voluntary insurance, the "doctor-racketeer" who measures success in dollars, the mere dues-paying member of organized medicine (in the same category as the non-voting citizen) are balm and solace to those who would bind your practice to a government controlled fee schedule, tie it up in red-tape and flood your office with those wanting "free" attention to the point where those truly sick can get only inadequate attention. These are some of the items underlined by Dr. Bauer.

The Hippocratic Oath is the easiest and most simple guide for living available to the members of the medical profession if it would hope to postpone the day of living by governmental edict.

R. H. K.

DEATHS

Dr. Olin West, Nashville, former secretary-general manager of the American Medical Association and its President-Elect in 1946, died June 20, 1952 at his home in the Helena Courts Apartments. Dr. West was the first secretary of the Tennessee Department of Public Health and was later the Commissioner. Aged 77.

Dr. Tavner Rogers, Decaturville, who had practiced medicine in Decatur and Henderson Counties for more than 60 years, died June 8, 1952. Aged 89.

Dr. Earnest A. Raines, Memphis, retired for past three years because of illness, died June 13, 1952. Aged 71.

Dr. John K. Crawford, Jr., Nashville, died of a heart attack on June 13, 1952 while he and his family were attending a family reunion at Natches Trace State Park. Aged 38.

Dr. John H. Derring, Memphis, retired radiologist, died of a heart attack at his home on June 3, 1952. Aged 62.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Warren-White-VanBuren Society

Dr. Hoyt C. Harris, McMinnville, is the new secretary of the society. The society had been without a secretary since Dr. Fisher, the former secretary, moved away. Now with the society fully organized, bigger and better programs are in store for the fall and winter months.

*

Knoxville Academy of Medicine

The Academy was addressed by Dr. H. D. Kerman of Oak Ridge on the subject of "Medical Isotopes" on June 10.

The June 24th meeting of the Academy, held in the Academy's air-conditioned auditorium, brought out a good attendance. Dr. William K. Swann read a paper on "Surgical Treatment of Mitral Stenosis." Dr. Monger, the veteran and efficient secretary, used the pages of his June 24th Bulletin to appeal to members to REGISTER and VOTE.

*

Memphis and Shelby County Society

At the May 6 meeting the program consisted of a symposium on "Emergency Care of Trauma and Medical Catastrophies." The subjects covered were:—"Management of Traffic Casualties" by Dr. M. Moore, Jr.; "Modern Early Care of Burns" by Dr. M. Adams; "Medical Emergencies" by Dr. P. Milnor; "First Aid in Poisoning" by H. S. Tackett; and a demonstration of "Present Day Resuscitation Methods," by Mr. E. D. Glaze of the American Red Cross.

The Society has gone on record as approving the fluoridation of the public water supply in Memphis. The Society has been joined in this endorsement by many local organizations, but the proposal (as of this minute) is meeting some city administration resistance. One City official said that he thought "we are taking a long step toward socialized medicine when we add something to our water which everyone must drink."

*

Dyer-Lake-Crockett Society

The Society held its annual June meeting on June 4th at Boyette's Camp on Reelfoot Lake. Guest speakers included Dr. W. C. Chaney and Dr. E. G. Kelly of Memphis. Many other Memphis physicians were also invited. Dr. J. R. Holifield of Tiptonville is the society's president.

*

Chattanooga-Hamilton County Society

The Society changed its regular meeting date in early June to avoid conflicting with the Annual meeting of the AMA. The scientific program was given by Dr. W. J. Sheridan, who discussed "Some Problems of Hand Surgery"; and Dr. R. G. Demos, who read a paper on "Endometriosis." The papers were discussed by Dr. R. B. Donaldson and Dr. Harry E. Jones.

*

Consolidated Medical Assembly

Drs. James G. Hughes, James N. Ettledorf and Fontaine S. Hill of the pediatrics division of the Tennessee Medical School addressed the Assembly at its regular dinner meeting at the New Southern Hotel in Jackson on June 3rd. The symposium topic was "Recent Advances in the Management of Nephritis and Nephrosis in Children."

NATIONAL NEWS

A.M.A. Resume'

The House of Delegates—AMA's policy-making body, was in session four days during the Annual Scientific Sessions in Chicago last month. Our delegates, Drs. W. C. Chaney, R. B. Wood, and C. M. Hamilton, were on hand for every session. House action covered an unusually wide field with major decisions being made on legislation, public relations, medical education, hospitals, veteran's medical care, and membership and organizational problems.

Here are some highlights:

After heated discussion of the President's Commission on Health Needs of the Nation, resolved to withhold judgment of the Commission pending its final report in December.

Favored amendments to the Constitution of the United States which would (1) limit the taxing power of the federal government, and (2) provide that no treaty or executive agreement shall conflict with any constitutional provisions or regulate purely domestic affairs.

Voted to not endorse any party or candidate in the coming national election.

Opposed transferring VA and Armed Forces hospitals to Federal Department of Health as is proposed by SB 1148 (pending).

Denounced Section 3 of an amended Social Security Bill which would give the Federal Security Administrator broad powers in the medical care of permanently and totally disabled beneficiaries. (Bill passed both Houses on July 5 with Section 3 included.)

Condemned the International Labor Organization as a sponsor of socialized medicine.

Approved dissolution of the National Education Campaign December, 1952. Whitaker & Baxter requested to be released as Directors at the same time.

Instructed Council on Medical Education to re-evaluate presently approved internships and residencies.

Instructed the Board of Trustees to appoint a committee to consult with the American Osteopathic Association on the matter of possible aid in improving osteopathic education.

Approved a progress report of the Special Committee on Federal Medical Services. The Committee is studying the problem of the hospital and medical care of veterans with non-service connected disabilities, along with other Federal medical care programs. (The Tennessee Resolution, after several stormy sessions over the past three years, is now in this Committee's hands. There are good indications that a showdown on this issue will come at the interim session in December.)

Approved and referred to the Special Committee on Federal Medical Services a resolution disapproving VA hospitals accepting non-service cases covered by prepaid insurance and collecting the insurance benefits, and also a resolution opposing any legislation which would provide medical and hospital benefits to dependents of service personnel.

Approved a report of the Board of Trustees which called for (1) a clear definition (by Congress) of the government's responsibility for veteran care, particularly non-service cases and dependents of service personnel, and (2) establish a Federal Board to allot hospital beds among federal agencies.

Other actions were: 1953 dues set at $25.00—established a single membership classification (abolished fellowship)—limited tenure of office of Standing Committees—enlarged Council on Medical Education—made past trustees members of the House of Delegates without vote—requested Trustees to study uniformity of membership requirements in state and local societies—instructed the Constitution and By-laws Committee to study and evaluate the Code of Ethics.

MEDICAL NEWS IN TENNESSEE

Vanderbilt University School of Medicine

Charles R. Park, M.D., has been appointed Professor of Physiology and Head of the Department effective July 1, 1952. He is a graduate of Johns Hopkins University School of Medicine and comes to Vanderbilt from Washington University, St. Louis.

★

Dr. John W. Hillman, has been appointed as Assistant Professor of Surgery to devote his full time to Orthopedic Surgery. A graduate of Johns Hopkins University

School of Medicine he comes to Vanderbilt from Baltimore.

* * *

Dr. Elliot V. Newman has accepted the appointment as the Joe and Morris Werthan Professor of Experimental Medicine to devote full time to teaching and research. A graduate of Harvard Medical School, Dr. Newman comes to Vanderbilt from Johns Hopkins University School of Medicine.

* * *

Thayer V. A. Hospital

Dr. Robert I. Carlson has been appointed as Chief of the Surgical Service. A graduate of Yale Medical College he has been with the V.A. since 1947. He will hold an appointment as Associate Professor of Surgery at Vanderbilt University School of Medicine.

* * *

University of Tennessee Medical Units

The American Heart Association has awarded two research grants to the Division of Physiology. Dr. C. Riley Houck was given $5,250 for the study of hypertension and kidney disease. Dr. R. L. Little received $5,050 for a study of the factors which produce the heart sounds.

* * *

Two visiting professors have joined the faculty for the Summer Quarter. They are Dr. W. C. Collings of the Department of Physiology at Michigan State College and Dr. J. R. Johnson of the Department of Physiology at the University of Ottawa.

* * *

Dr. John L. Wood, Professor of Chemistry will become Head of the Department of Biochemistry on July 1. He has been on the faculty since 1946. His doctorate was received at the University of Illinois.

PERSONAL NEWS

Dr. Hal Henard, Greeneville physician, was elected chairman of the Board of Trustees of Tusculum College. He succeeds Col. E. W. Palmer of Kingsport. The College recently conferred an honorary Doctor of Science degree on Dr. Henard in recognition of his community and military service record.

Dr. Perry Huggin, medical director of East Tennessee Tuberculosis Hospital, addressed the Knoxville Rotary Club recently.

Dr. Carrol Turner, Memphis, a member of the Association's Board of Trustees, addressed the Jackson Junior Chamber of Commerce, as the first of four scheduled speakers in public forum on timely health subjects. Dr. Turner's subject was "Narcotics." A film was shown in connection with the address. **Dr. Albert Trithart** is director of the Jaycee's health forum project which is attracting large audiencies.

Dr. R. H. Hutcheson, Public Health Commissioner underwent an operation at a Nashville hospital recently. Dr. "Hutch" is doing fine and has returned to work.

Dr. Ira F. Porter, Greenfield physician, was cited as the "Citizen of the Week" by the Greenfield Gazette, a local newspaper. The citation listed many professional and civic interests along with his hobbies of farming and raising purebred Hereford cattle.

Dr. W. S. Poarch of Lewisburg has completed sixty hours of postgraduate training in obstetrics by the General Practice Clinic through the Postgraduate Department of the University of Tennessee college of Medicine.

LOCATION WANTED

Location Wanted

A forty-year-old out-of-state surgeon desires a location in Tennessee. He submits the following information about himself.

Born 1911 in Syracuse, N. Y. Graduated 1936 from Syracuse University College of Medicine. Interned 1936-38 Methodist-Episcopal Hospital, Brooklyn. Surgical Resident New York Hospital 1939-41. Thoracic Surgical Resident Triboro Hospital, Jamaica, L. I., N. Y. Entered MC-USN 5/41 as Lt. (jg). Resigned in October, 1949 (Commander), Chief of Surgery VA Hospital, Kerrville, Texas, 1949-51. Now located at VA Hospital, Butler, Pa.

F.A.C.S., Assoc. Fellow A.C. Chest Physicians, Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

I am interested in a community where I can enjoy family life (wife and two sons) and carry out an active surgical practice. Wish to limit practice to thoracic surgery eventually, but would do general surgery to establish myself.

LW-6

*

A physician desiring a location in Tennessee writes as follows:

"I am 31, married, with three children, a native of Kentucky even though born in Chattanooga, and had 41 months of service in the Marine Air Corps during World War II. I graduated from Washington University in St. Louis in 1950 and served a rotating internship at St. Louis City Hospital from July 1, 1950, to July 1, 1951. At present I am taking a rotating residency at the charity hospital here in Monroe, Louisiana. The training here has a very large surgical component. My year here will be up June 30 and I will want to go into practice immediately thereafter."

LW-8

*

A physician desiring a location in Tennessee sends us the following information: Age, 32. Married, Graduate, Tulane School of Medicine. Internship, Baptist Hospital Memphis, Tenn. Rotating Residency, Baptist Hospital, Birmingham, Alabama. Two years army service, three years general practice and assistant to an F.A.C.S. He states that he would be available on six weeks notice and would prefer a town with a hospital.

LW-9

*

General and Thoracic Surgeon

I am 31 years of age, married, and have two children. I graduated from Cornell University Medical College in 1945. I had an internship at Bellevue Hospital, Second Surgical Division (Cornell) following which I served two years in the United States Navy, mostly overseas. Upon my return I taught anatomy at Cornell University Medical College for nine months followed by six months as assistant resident in general surgery at Meadowbrook Hospital, Hempstead, New York. I completed an assistant residency in general surgery at Bellevue Hospital, First Surgical (Columbia) Division. At present, I am completing a two-year residency in thoracic surgery at Bellevue (last six months of this is spent at Presbyterian Hospital as resident in thoracic and vascular surgery).

LW-10

*

A physician interested in private, associate or clinical practice of surgery, furnishes the following information: Aged 32, married, Baptist. M.D. from Washington University, 1944. One year rotating internship at Saint Louis City Hospital, 1944-45. Five-year surgical residency at Charleston, West Virginia, General Hospital, 1947-52. Two years' service with U. S. Army, 1945-47.

LW-11

*

Location Wanted

A physician 27 years of age is interested in entering general practice in West Tennessee. Personal and professional data: Married, no children, Presbyterian. M.D. from Temple University, 1951; general rotating internship Temple University Hospital, 1952; has completed parts I and II National Board of Medical Examiners. Draft status—U. S. Navy service, 1943-46, honorable discharge, priority group II.

LW-12

*

A physician who is interested in locating in the South writes as follows:

"In June, 1951, I graduated from Emory University School of Medicine, and on June 30 of this year I shall complete my internship at Wayne County General Hospital, Eloise (Detroit), Michigan.

I am 28 years old, white, male, married, have one child and another is expected in the fall.

I am interested in general practice and would consider an assistantship, partnership, or a Locum Tenens of from six to twelve months. Also, I would consider opening a practice in a community where a doctor is needed.

LW-13

*

Physician Wanted

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

*

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

*

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosperous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

★

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

★

The following letter has been received in this office:

"The Midland Community Improvement Club has built a medical center and now desires the services of a reputable doctor.

"This building has two offices, a waiting room, toilet and supply room, has oil heat, hot and cold running water, refrigerator and the equipment of the late Dr. V. S. Campbell of Murfreesboro, all of which will be furnished free of charge to a doctor willing to take charge.

"Midland is a rural community located midway between Murfreesboro and Shelbyville, fifteen miles from each place and the nearest doctors.

"We will appreciate any help you can give us in securing a doctor.

"For further information please contact the undersigned:

"Sincerely yours,
James I. Williams
Fosterville, Tennessee"

PW-9

★

Physician Wanted

Tennessee State Medical Association
Nashville, Tennessee
Dear Sirs:

I am coming to you for assistance to see if you can help us locate a doctor who would be interested in coming to the City of Cumberland Gap. Our small town of approximately 500 people is the only incorporated city in Claiborne County. We have not had a doctor for some time and we desperately need one. We used to have four doctors here. Any good doctor could easily make two or three thousand dollars a month. Tazewell is 13 miles away and doctors there will not come here, and doctors in Middlesboro, Kentucky, positively will not come over here. Last night I called three and not one would agree to come to see my daughter who was ill.

Anything you can do to help us in securing one or two doctors will be greatly appreciated. Office space and living quarters are available.

Yours very truly,
J. S. Collins
Councilman
City of Cumberland Gap

★

Physician Wanted

A physician in an upper East Tennessee City will be away from his practice for one year, and would like to have a young physician take over for him during this absence. After July 1, a five-room fully equipped office building which is visited daily by 40 to 75 patients will be available. The office is located in an industrial city of 14,000 people, and across the street from a 32-bed hospital. Hospital privileges assured. An excellent opportunity for a general practitioner. Various financial arrangements possible, and good opportunity for new doctor to remain permanently.

PW-10

★

The town of Cross Plains, Tennessee, located thirty miles north of Nashville, is in need of a physician. The town is twelve miles from Springfield, where the county hospital is located, and the practice would be mainly rural.

Mr. W. Burgess Thomas owns a modern drugstore there and will furnish a physician a three room suite free of charge. The suite is equipped with gas heat, lights and water.

Anyone interested may contact Mr. W. Burgess Thomas at Cross Plains.

★

The Lions Club of Huntland, Tennessee, two years ago, took upon itself the sponsorship of building and equipping a medical clinic in Huntland, hoping to locate a doctor here. As an out growth of the initial movement begun by the Lions Club, a private corporation has been formed and sufficient stock has been sold to make the project a reality. Construction has been started on the building, and it will be completed within the next three months. As yet, we have been unable to find a doctor to serve the community and it is toward that end, I am writing you.

Huntland is a small town, incorporated, located in Franklin County, Tennessee, and just off U. S. Highway 64. We have a good high school, a progressive bank, first class communication and transportation service. The surrounding area is basicly agricultural and tenanted by better than average rural families. A doctor located in Huntland would serve around 1,000 families living in a radius of ten miles and these families are trained to clinic service. It would not be necessary that he come to us with any financial backing as the clinic and facilities could be made available to the right man under several reasonable forms of contract. We do want a young man, who would like to make Huntland his home, grow with the community and be an active citizen therein. I have lived in this township for the past twenty-five years and I believe that I am qualified to state that any doctor with a good personality and a desire to serve can anticipate an income of $20,000 per annum before taxes at his second year of practice. If he is able to do minor surgery, that income would be increased accordingly.

Any assistance you may render in helping us to make contacts will be highly appreciated.

Sincerely yours,
Durward McCord, Pres.,
Huntland Clinic Corporation

Information on physicians and locations available from the Executive Secretary, Tennessee State Medical Association, 504 Doctors Building, Nashville, Tennessee.

ANNOUNCEMENTS

Dr. Lester F. Littell has opened his clinic in the Cumberland Heights Community and is Grundy County's only doctor. The county had been without a physician for nearly three years.

Dr. Roy O. Young, Chattanooga, has opened his offices in the Robinson Apartments, Suite 100.

Dr. Wesley A. Barton, has closed his Clinic in Chattanooga, and plans to open his office at 390 Church Street, Cleveland, around July 1. A specialist in urology, he has practiced in Chattanooga since 1942.

Dr. Parker D. Elrod has joined **Dr. Ogle Jones** at Centerville. Dr. Elrod, 32, received his M.D. from Vanderbilt in 1943.

Dr. James T. Allen, Waverly, has moved into a newly completed addition to the Waverly Clinic. He has been practicing in Waverly since last December.

Dr. Grover Wallace is another physician newcomer to Pulaski. He will have offices on West Madison Street.

★

Southern Pediatric Seminar

The 32nd Annual Session of the Southern Pediatric Seminar will be held July 14-26th at Saluda, N. C. Write Dr. L. D. Smith, Jr., Saluda, for additional information.

★

The Tennessee Radiological Society

This society announces the following as officers elected at their annual meeting in Knoxville in April:

Dr. J. E. Whiteleather, Memphis, President

Dr. Joseph McKinney Ivie, Nashville, Vice-President

Dr. J. Marsh Frère, Chattanooga, Secretary-Treasurer

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Albert J. Crevello, M.D.
Diplomate, American Board of Psychiatry and Neurology, Inc., Medical Director

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Harwell Wilson, Memphis
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White Patton, Chattanooga
H. L. Monroe, Erwin
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Hospitals
J. L. Hamilton, Chairman, Chattanooga (1955)
David W. Hailey, Nashville (1953)
W. O. Baird, Henderson (1954)
A. H. Lancaster, Knoxville (1953)
Ralph H. Monger, Knoxville (1954)
Carrol C. Turner, Memphis (1955)
David K. Gotwald, Nashville (1955)

Legislative and Public Policy
C. M. Hamilton, Chairman, Nashville (1953)
Frank Harris, Chattanooga (1955)
H. L. Pope, Knoxville (1954)
T. R. Ray, Shelbyville (1955)
James Stanford, Memphis (1953)
R. H. Kampmeier, *ex offiio*, Nashville
Daugh W. Smith, *ex officio*, Nashville

Liaison
J. O. Manier, Chairman, Nashville (1953)
Joel J. Hobson, Memphis (1955)
John B. Steele, Chattanooga (1954)
Kyle C. Copenhaver, Knoxville (1955)
Carl E. Adams, Murfreesboro (1954)

Insurance
B. F. Byrd, Sr., Chairman, Nashville
H. B. Gotten, Memphis (1953)
Kyle C. Copenhaver, Knoxville (1955)

Memoirs
Henry L. Douglass, Chairman, Nashville (1953)
J. C. Pearce, Jackson (1954)

Postgraduate Instruction
W. C. Colbert, Chairman, Memphis
James M. Bethea, Memphis
Edward T. Brading, Johnson City
Robert M. Finks, Nashville
A. M. Patterson, Chattanooga
Harold Boyd, Memphis
Carrol Turner, Memphis
Bart N. White, Murfreesboro
John B. Youmans, Nashville
Frank Whitacre, Memphis

Cancer
C. H. Heacock, Chairman, Memphis (1953)
Louis Rosenfeld, Nashville (1955)
C. S. McMurray, Nashville (1954)
Stanton S. Marchbanks, Chattanooga (1953)
Ralph H. Monger, Knoxville (1955)
R. L. Sanders, Memphis (1954)

General Practice
C. B. Roberts, Chairman, Sparta (1955)
J. Paul Baird, Dyersburg (1953)
Estill L. Caudill, Jr., Elizabethton

Emergency Medical Service
James E. Wilson, Chairman, Memphis
James C. Gardner, Nashville
W. C. Dixon, *ex officio*, Nashville
Joe L. Raulston, Jr., Fountain City
W. J. Sheridan, Chattanooga
J. R. Thompson, Jr., Jackson

Industrial Health
Jean S. Felton, Chairman, Oak Ridge (1954)
Bedford T. Otey, Memphis (1953)
George Duncan, Nashville (1955)

Prepaid Insurance
N. S. Shofner, M.D., Chairman, Nashville
John T. O'Connor, Knoxville
Clyde York, Columbia
R. H. Peoples, Memphis
R. B. Wood, M.D., Knoxville
J. P. Sloan, M.D., Jamestown
Joseph W. Johnson, Jr., M.D., Chattanooga
W. C. Chaney, M.D., Memphis
A. J. Baird, Nashville

Executive Subcommittee
N. S. Shofner, M.D., Chairman, Nashville
D. W. Smith, M.D., Nashville
Charles L. Cornelius, Sr., Nashville
R. H. Kampmeier, M.D., Nashville

Public Service
L. W. Edwards, Chairman, Nashville (1954)
H. L. Monroe, Erwin (1953)
C. C. Smeltzer, Knoxville (1955)
W. A. Garrott, Cleveland (1954)
Thurman Shipley, Clookeville (1953)
Ogle Jones, Centerville (1955)
W. N. Cook, Columbia (1954)
J. R. Thompson, Jr., Jackson (1953)
Paul Baird, Dyersburg (1955)
Harold Boyd, Memphis (1954)

Members State-at-Large
J. O. Manier, Nashville (1953)
C. B. Roberts, Sparta (1955)
W. C. Chaney, Memphis (1954)
R. B. Wood, Knoxville (1953)
J. Marsh Frere, Chattanooga (1955)

Executive Subcommittee
L. W. Edwards, Nashville (1954)
J. O. Manier, Nashville (1953)
Charles C. Trabue IV, Nashville (1955)

Liaison Committee to the United Mine Workers of America
B. M. Overholt, Chairman, Knoxville (1955)
Cecil E. Newell, Chattanooga (1953)
J. S. Hall, Clinton (1954)

Advisory Committee to Woman's Auxiliary
Clyde Croswell, Chairman, Memphis
Robert M. Finks, Nashville
W. W. Potter, Knoxville
Moore J. Smith, Jr., Chattanooga

Veterans Affairs
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This is a paper replete with warnings for the doctor who opens the abdomen or who is tempted to do so.

MISTAKES AND PITFALLS IN THE PRACTICE OF SURGERY*

CHARLES C. TRABUE, M.D., Nashville, Tenn.

There is no occupation in which a mistake is more costly and more tragic than it is in the practice of surgery. The surgeon must realize each time he picks up a knife that the life of the patient rests upon his judgment and skill. In many instances his decisions must be made without taking the time for consultation or for reference to his books and journals. There is probably no other occupation in which a man is called upon to make decisions that will make the difference between good health and crippling, even between life and death; and in which these decisions must be made by him alone and without much time for deliberation; and in which the decisions must be based upon such a broad knowledge and experience. Therefore it would seem to be profitable to spend some time considering the mistakes and pitfalls in which a surgeon is likely to become ensnared. I have chosen to deal with this subject by discussing first some of the broad mistakes that we can make in our general attitude and approach toward surgery, and then to consider some of the more specific mistakes that are frequently made in a few particular types of surgery. The nature of a paper such as this is necessarily critical. May it be understood that the author intends to be no more critical of others than he is of himself, and that many of the mistakes discussed have been his own. In fact, I have wondered whether the program committee chose this subject for me because of my broad experience in making mistakes.

Surgical Diagnosis

First, then, under the heading of general mistakes, may be listed a failure to spend sufficient time and thought on the surgical diagnosis. Surgical diagnosis is probably no more difficult than medical diagnosis. But so often the surgeon will see the symptoms and signs that mean surgical emergency to him, and he will proceed to operate immediately only to find that if he had been more observant a useless and frequently harmful operation would have been avoided. I know of two very gross examples of this occurring in the past month. One was a case of very obvious jaundice, so recorded by the interne in his pre-operative note, and yet the patient was subjected to an appendectomy. It is certain that removing a cold appendix did not help this patient and the hepatitis which she had was probably made worse by the anesthetic and the operation. The other recent case was one of suspected perforated duodenal ulcer. The surgeon was aware that the history and physical findings were not typical and in discussing the case with two other men was advised by both to have a serum amylase test made However, he proceeded immediately with operation only to find evidence of an acute hemorrhagic pancreatitis. A belated serum amylase test made while the patient was on the table revealed a diagnostically elevated level. Statistically it has been shown that the mortality rate of acute pancreatitis is increased by a laparotomy in the early stages of the disease. These two cases illustrate rather obvious carelessness in the pre-operative work-up. Each of these cases should have been correctly diagnosed and each operation avoided by a better pre-operative examination. Mistakes are not always this easy to avoid and, therefore, no major procedure should be undertaken without very careful attention to a detailed history and a complete physical examination. And seldom is the urgency of the situation so great that we will need to forego whatever laboratory and x-ray studies are indicated. In one of the Nashville hospitals a large series of patients having probable upper abdominal surgical emergencies have been subjected to a modified gastro-intestinal x-ray series on admission. The information thus gained has in a good many cases been of real value in helping the surgeon to decide correctly whether he should operate or not.

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*Read before the Tennessee State Medical Association, Knoxville, April 8, 1952.

All of us have certainly had the experience of thinking, "I wish that I had not operated on that patient." Such a predicament may be unavoidable but more often it comes about because of our own carelessness and our over-confidence in what we think is an obvious diagnosis.

Limitations in Experience

II. Failure to realize one's own limitations as a surgeon may lead him into the most tragic sort of pitfall. Every doctor must realize that his particular training and experience have qualified him to carry out certain procedures with ease and skill. But, by the same token, he also knows that he does have limitations. The very best general surgeon is not likely to undertake the removal of a brain tumor. Nor will he undertake to treat diabetes or coronary thrombosis. But there is a tendency for some doctors with limited surgical training to undertake procedures for which they are not qualified. Thorek, in his book on "Surgical Errors and Safeguards," states that no one should ever open a human abdomen unless he feels competent to deal with every surgical condition which may confront him.

Knowledge of Pathology

III. A working knowledge of gross pathology is a *sine qua non* of good surgery. The basis of this knowledge must be laid in medical school and postgraduate training, but the knowledge must be broadened and kept fresh by an attitude of curiosity on the part of the surgeon,—so much curiosity that he will follow his specimens to the laboratory and have the pathologist discuss the diagnosis with him. Unless the surgeon does have a report from the pathologist on all of the tissues he removes he is likely to continue making the same errors year after year. For example, a large corpus luteum cyst in which a hemorrhage has occurred certainly gives the appearance of disease and may easily be mistaken for a chocolate cyst of endometriosis. Thousands of such cysts have been removed because of the surgeon's honest, though mistaken belief that the ovary was pathological. We should all be able to distinguish the normal from the pathological and to distinguish those changes which are physiological rather than pathological. More difficult is the problem of deciding upon the exact nature of the pathological lesion. It is notoriously difficult to distinguish grossly between an inflammatory lesion and a malignant lesion in the head of the pancreas or of the colon. And yet such a distinction is of the greatest importance because of the difference in the surgical treatment of the two conditions. So it must be granted that fewer mistakes will be made by the surgeon who has a good knowledge and understanding of gross pathology.

Exploration of the Abdomen

IV. Failure to make a complete abdominal exploration may be an error that will have grievous results. Such an omission may lead to completely overlooking the real pathology as in a case I saw many years ago in which a normal appendix was removed and an inflamed Meckel's diverticulum was not discovered until autopsy. The fact that a gall bladder is found to be pathological does not preclude the co-existence of duodenal ulcer or chronic pancreatitis. And it is most embarrassing to remove a gall bladder and to give a good prognosis only to have the patient suffer from colic due to a stone in the common duct which should have been discovered by a more thorough exploration.

Not only must one explore the abdomen thoroughly to make certain that he is aware of all of the pathologic changes present, but he must also be certain that he has correctly estimated the entire situation and has chosen the operation best suited for the circumstances. It is so much better to decide on the type of operation after careful exploration rather than to rely on a preconceived plan. A good example of the wisdom of this routine is often seen in gastric surgery. Although gastric resection is good treatment in many types of duodenal ulcer, it is not the best operation in all cases. If the ulcer is a deep one, low in the duodenum and on the posterior wall with dense adhesions to the pancreas, a resection will be accompanied by a high morbidity and mortality rate. If the resection is going to be really difficult and there is some question about whether a satisfactory closure of the duodenal stump can be made, then it is better judgment to abandon the resection in favor of some operation such as gastro-enterostomy and vagotomy. So the surgeon must be able to visualize in advance the entire operation and be certain that he is not going to get into difficulty that could have been avoided. Total exploration before deciding on the exact operation to be undertaken will often avoid this difficulty.

Pre- and Post-Operative Care

V. It is a great mistake not to take full advantage of our present day knowledge of pre- and post-operative care of the patient. In recent years we have gained a considerable knowledge concerning electrolyte balance, water balance, blood volume, acidosis, alkalosis, nitrogen retention, serum protein deficiencies, various specific vitamin deficiencies, impaired liver and renal functions and, of course, anemia. With laboratory methods of determining all of these pathological conditions, and with the development and availability of many fine products used for their correction, we now have at hand a much more exact and scientific approach in preparing the patient for surgery and for preventing and treating many post-operative complications. Unless the operation is truly an emergency there is frequently much to be gained by the delay of a few days to be spent in the correction of any such condition. Thus the 'poor risk' patient may be transformed into a 'good risk' patient who can then tolerate without difficulty a long operation and its accompanying anesthesia. Post-operatively there is much to be gained by the administration of the proper amounts of fluids, electrolytes, protein, glucose, alcohol, vitamins, albumin or whole blood; by the encouragement of early ambulation which will result in an earlier return of normal physiological functions; and by the use of the Wangensteen or Miller-Abbott tube and by alert supervision to detect and treat complications.

So much for the broad, general mistakes in our approach to surgery. Let us now consider a few specific types of surgery and how difficult it is to avoid mistakes in any one of them.

Specific Pitfalls

1. Mistakes made in treatment of *carcinoma of the breast* are legion. Granted that it is a mistake to biopsy or remove a breast carcinoma, unless we are prepared to proceed immediately with a radical mastectomy, then are we correct in tackling any breast lesion in the office under local anesthesia? We may be sure on occasion that cystic disease is present, but we can never be sure that there is not a co-existing malignant change. The pathologist frequently has difficulty with the distinction between some types of mastitis and early carcinoma even when he has the tissue in his hand and the slide under the microscope. How, then, can we hope to be right when we palpate the lesion through an overlying mass of skin and breast tissue and attempt to make a positive diagnosis pre-operatively?

Another pitfall to be avoided is that of operating on any slightly suspicious breast lesion without first making a careful search for possible existing evidence of distant metastases. A pre-operative chest x-ray should certainly be routine because of the great tragedy of mutilating a patient with a radical mastectomy only to discover post-operatively that she could not be cured at all because of an existing pulmonary metastasis.

Another error in breast surgery is that of not being sufficiently thorough if the lesion is malignant. I refer to the surgeon who thinks that a radical mastectomy can be done without removing both the pectoralis major and minor, or the surgeon who considers that he has done an axillary dissection by wiping away the axillary fat with gauze. In all fairness, unless the dissection is carried out with scalpel or scissors, with complete exposure of vessels and nerves right up to the apex of the axilla, the operation should not bear the name of radical mastectomy.

II. In *gall bladder surgery* the pitfalls are not only many and hard to avoid, but they may be difficult to escape. Injuries to the common duct and ligation of the right hepatic artery are the two most common sources of difficulty. It might almost be said that there is no such thing as normal anatomical arrangement of the extrahepatic ducts and vessels, because the most frequent arrangement occurs in only about 30 percent of all cases. This being the case, a clamp which is placed just at the base of the gall bladder where the cystic duct and artery are thought to be, may or may not produce damage. Such a routine will inevitably lead to division of the right hepatic artery in some cases and injury to the common duct in others. Such mistakes can be rather easily avoided if the surgeon will take the time and pains to visualize all of the structures before applying a clamp or ligature. With a hemostat on the ampulla applying traction outward the peritoneum of the hepato-duodenal ligament can be incised. By then using a tiny pusher sponge aided by an occasional light snip with small scissors the cystic duct can always be visualized. Its entire length should then be dissected free from surrounding tissues so that the proper level for division can be accurately determined. After division of the cystic duct the cystic artery is seen with very little additional dissection. It is not enough to see this artery, but it must be followed upward lest it cut back into the liver. In such case we are dealing with the right hepatic artery, and the cystic artery will be found as a small branch from it. Adequate exposure, good lighting and careful dissection will prevent the surgeon from falling into the worst pitfalls of simple gall bladder surgery.

III. The pitfalls in *pelvic surgery* are numerous. The surgeon must be constantly alert, conscientious and wise to avoid falling into the trap of performing unnecessary surgery in the female pelvis. The majority of women at or near the menopause fancy that something is wrong and it is an easy matter to convince them that they can be benefitted by surgery, or that surgery must be performed to avoid the danger of threatened cancer. The pathologists in most hospitals will tell us that many of the hysterectomies could have been avoided by good endocrine therapy, and that many of the ovaries removed have good functioning tissue.

Nor are the middle aged women the only ones to get the surgeon into trouble. I recall the case of a young women who apparently had a large fibroid. The surgeon was sufficiently careful to request a pre-operative Ascheim-Zondek test. After a negative report was received he proceeded with a hysterectomy and was very much embarrassed to find that he had removed a pregnant uterus. The patient, however, was very happy and readily admitted that the urine specimen which she had brought to the office was by courtesy of her sister. A few years ago I saw a young woman with signs of acute and massive hemorrhage. Ectopic pregnancy seemed probable. After clearing every one from the room I explained in some detail to her the importance of a very accurate history. She seemed frank enough and explained to me that she was not only single but virtuous, and that any sort of pregnancy was out of the question. After removing a ruptured ectopic pregnancy, I returned to her room that evening to have her tell me that she had wanted to keep her three months old marriage a secret. Perhaps the moral to be drawn from these two cases is, "Never trust a woman." But to put it more kindly,—it is better to consider the physical findings as more important than the history if pregnancy is to be considered. The frequency of ill advised surgery in the pelvis should make us all doubly wary. The exact condition of the pelvic organs cannot always be determined until the time of laparotomy and thus the surgeon should avoid the error of telling the patient categorically just what operation he will perform. His decision must frequently await careful inspection and palpation of the exposed organs.

IV. Operations for *cancer* are more frequent every day and comprise a considerable portion of any surgeon's work. The question with which we are constantly faced is: Can I by any sort of radical operation cure this patient even by accepting a serious mortality risk, or has the disease advanced beyond all hope of cure? If cure is out of the question, should we carry out some palliative procedure? Obviously we must seek to carry out the radical procedure more and more often if we hope to improve our cure rate. If there are no distant metastases evident, and if it seems at all possible to remove the lesion beyond the area of invasion, then the surgeon must not shirk because of the magnitude of the job or because of the risk of high mortality. In such circumstances he must carefully avoid the pitfall of proceeding beyond the point of turning back only to find that the tumor cannot be resected. For instance, in a contemplated abdomino-perineal resection, after ligation of the superior hemorrhoidal vessels it is too late to change one's mind about the resectability of the tumor. In a similar manner, one can get into trouble in carcinoma of the stomach by discovering that the hepatic artery or vena cava are invaded after the operation has been advanced beyond the point of turning back. However, in operating for cancer the surgeon is entitled to take some risks that are not permissible in any other type of surgery.

Some of the errors, then, which we must constantly avoid in cancer surgery are:

1. To be sure that there are no distant incurable metastases.
2. Never to be satisfied with a palliative or half radical operation if there is a chance of cure by making a bolder approach.
3. Be as certain as possible that the radical attempt will not be made in vain.

Summary

In summarizing, it has been suggested that the five most frequent and tragic mistakes made by the general surgeon are: failure to give sufficient time and thought to surgical diagnosis; the attempt to do surgery for which one is not qualified; a lack of knowledge of gross pathology; failure to completely explore the abdomen; inadequate pre- and post-operative care.

A few specific pitfalls in surgery of the breast, gall bladder, pelvis and malignant disease have been mentioned. An effort has been made to point out how these errors can be avoided. Perhaps this frank admission of some of our errors will help us to avoid them in the future.

Discussion

DR. CHARLES R. ZIRKLE (Knoxville): Mr. Chairman and Gentlemen.

I would like to compliment Dr. Trabue on his excellent presentation of the problems that are ever lurking in the background of any man who does surgery.

How easy it is for the surgeon to make mistakes in diagnosis is borne out by the pathologist's report when the charts are received at Record Committee Meetings. It is my opinion that the majority of these mistakes are due to ignorance of the basic knowledge required of any surgeon, that is, the required acumin to differentiate the abnormal from the normal and the physiological changes that occur in health and disease. Special reference is made to the thousands of normal corpus lutea removed needlessly each year.

The proof of the mistakes made in technical ability is brought to our attention by the numerous secondary operations which are done yearly for strictures of the biliary tract. These can usually be avoided if all structures are identified before section, as was so ably described by Dr. Trabue.

Oftimes the busy surgeon tends to neglect the pre-operative study, to take the word of others, and to forget the patient once the operative procedure has been performed. It is my candid opinion that this doctor ceases to be a surgeon but becomes a surgical technician, to all intents and purposes, and frequently with fairly disastrous results.

It is not fitting that I review the foregoing comprehensive treatise as is done so often in discussions. But I would like to say that I enjoyed the paper very much.

Precordial pain is one of the complaints met almost daily in the physician's office. Unfortunately it is misinterpreted all too frequently as being of cardiac origin. The ensuing neurosis stands high on the list of physician-induced neuroses.

PRECORDIAL PAIN: DIFFERENTIAL DIAGNOSIS*

R. B. WOOD, M.D., Knoxville, Tenn.

Although the literature contains numerous articles on this subject, the increasing number of cases encountered by members of the profession justifies a continuous reexamination of this increasingly important subject. From the viewpoint of the relationship of this subject to that of cardiovascular disease alone, there is justification for a few moments discussion this morning.

One's thoughts naturally turn to the causes of precordial pain and a glance at an anatomical chart (lantern slide) gives a partial clue as to the number of possibilities. We point to the anatomical proximity of many organs underlying the precordial area and by means of a second chart (lantern slide) we call attention to those organs whose nerve supply is partially received from either the same segmental sources or whose segment is immediately contiguous to that of other segments which receive afferent impulses from organs either adjacent to structures under the precordial area, or slightly distant thereto.

That pain in any area of the body, is due to so called viscero-sensory reflexes has long been known. That it does not need to be restricted to one or more given segments of the cord but may overflow into others, is also accepted. The inter-segmental type of reflex thus allows widespread sensory manifestation of a disturbed underlying viscus, and thus we see how cardiospasm for instance may arise from an irritation of the bladder, (1) or precordial distress may arise from a hiatal hernia. While the term precordial pain is most likely to suggest distress that arises from the heart, we must remember that there are a large number of other sources for this type of pain. These may be divided into:

(1) Pain arising from the chest wall itself,
(2) Pain referred to the chest from abdominal organs,
(3) Pain arising from intra-thoracic viscera other than the heart such as:
    (A) Aorta,
    (B) From the pulmonary artery,
    (C) From the lung, bronchi, pleura, mediastium,
    (D) Pain arising from the esophagus.
(4) Pain arising from the heart,—we shall leave for discussion the pain arising from this area to the last.

In the group having pain arising from the chest wall, the soreness and discomfort in the chest wall from early *herpes zoster* is unlikely to be a difficult diagnostic problem. Its superficiality and the exquisite tenderness localized to a segmental nerve distribution not preceded by the usual history of severe chest pain, accompanying shock, et cetera, should serve to differentiate it, and lead one to the suspicion of the true cause even prior to the appearance of the characteristic eruption.

The usual history of trauma and the relationship to position, movements of the chest wall and the localized tenderness should serve to differentiate painful disorders associated with *fracture of a rib* or the *displacement of a costal cartilage.* The *arthritic* or *destructive lesions* involving the spine such as osteo-arthritis, osteomyelitis, tuberculosis, metastatic neoplasm are usually differentiated by their origin and radiation of pain, or their relationship to posture, or by their associated aggravation by such movements such as from the act of coughing, sneezing, et cetera. Occasional difficulty from a diagnostic standpoint is encountered in the pressure pain from the *anterior scalenus muscle syndrome*, usually exaggerated by the carrying of heavy objects in front of the individual and hence associated with effort. It may be partially identified by the acuteness of the pain during certain body movements such as elevation of the arm as in putting on one's overcoat. This pain vanishes quickly with the cessation of the causative activity and is absent during activity unassociated with use of the shoulder muscle group.

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*Read before the Tennessee State Medical Association, Knoxville, Tenn., April 8-9, 1952.

The pain from *intercostal neuralgia* or neuritis will usually be found to be fairly easily differentiated from angina by the shortness of the duration of the pain itself, by the fact that it is not associated necessarily, with effort pain, and by the fact that it is accompanied by localized tenderness that often may be traced around the body to the vertebral column. The type of pain, furthermore, is not like that affecting either heart or bone and usually arises in no special relationship to specific movements, or in relation to general exertion.

A frequently annoying symptom both to the physician as well as to the patient is the occurrence of *shoulder pain* which often arises in those individuals suffering from either angina pectoris or from a past acute myocardial infarction. This pain is a problem for the physician from the standpoint that it may be erroneously diagnosed as bursitis or arthritis without the recognition of the fact that it may have arisen from reflex changes in muscle tone due primarily to unrecognized disturbance in the coronary circulation. It may also create difficulty for the physician and the patient because it may be unjustly blamed to the angina itself. As a rule this type of pain occurs after myocardial infarction and it will be found to be related to movements of the arm and perhaps be accompanied by localized tenderness of the shoulder itself. Only careful history and re-examination will serve to differentiate it from other types of pain.

In this era of a public acutely conscious of the significance of chest pain, a large number of patients visiting the physicians office will be found to be suffering from chest pain referred from the abdominal organs. This is especially true of a group susceptible to the attractive advertisements in trade magazines of expert culinary accomplishments, and perhaps abetted by partaking of certain products of grain which prohibit the recognition of the sensation of satiety. I refer to that group of symptoms arising from the *upper gastro-intestinal tract* produced by aerophagia and pylorospasm brought on either by rapid eating, as well as over indulgence. The latter is also frequently encountered in the tense or emotional individual, in whom many other complaints based on the same background may be uncovered by a properly taken history.

Pain from this same region may however be encountered in individuals who do not fall in either of the above classifications. Such a one is shown in figure 1, an example of a *hiatal hernia* which had been overlooked in three previous gastro-intestinal series. Unfortunately it could not be relieved by surgery because of a congenitially short esophagus. However, the owner was relieved of considerable anxiety when it was found that his precordial pain was not due to coronary disease. The pain from this difficulty is often retrosternal with radiation either to, or from the shoulder, which is most commonly noted after a heavy evening meal but which also may occur with no relationship to eating. It tends to be aggravated by either emotion or by fatigue, but in contradistinction to the pain of effort of angina, it is often worse at night after retirement and is relieved by walking about and occasionally by belching or vomiting.

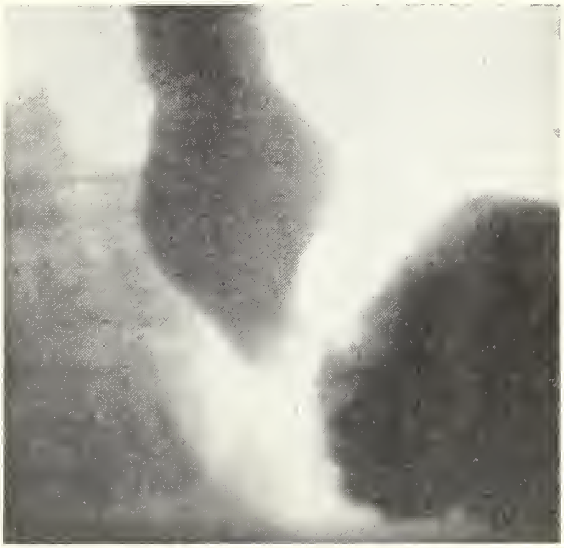

Fig. 1

Peptic ulcer may give rise to substernal or precordial pain probably induced by pylorospasm as in the case of the individual whose x-rays are shown in figure 2. This was discovered on the patients fourth admission to a hospital within the period of two years. The three previous admissions had been for symptoms thought to be on the basis of coronary artery disease, because of low retrosternal pain.

Especially worthy of mention is the rather frequent occurrence of pain in the precordial area arising from *spasm of the splenic flexure* of the colon. This pain is cramp-like in nature lasting several seconds and may often be partially reproduced by any activity that increases intra-abdominal tension. If associated with the presence of an accumulation of gas in the bowel, it would necessarily be relieved by anything causing a shifting of the position of the gas such as its expulsion, the administration of an enema or a shift in the position of the body if in bed. More difficult to explain is the presence of distress in individuals suffering from spastic constipation and in whom pain may occur without the presence of gas. Only through the relief of the spasticity by diet and antispasmodics will confirmatory evidence of the causative factor be found.

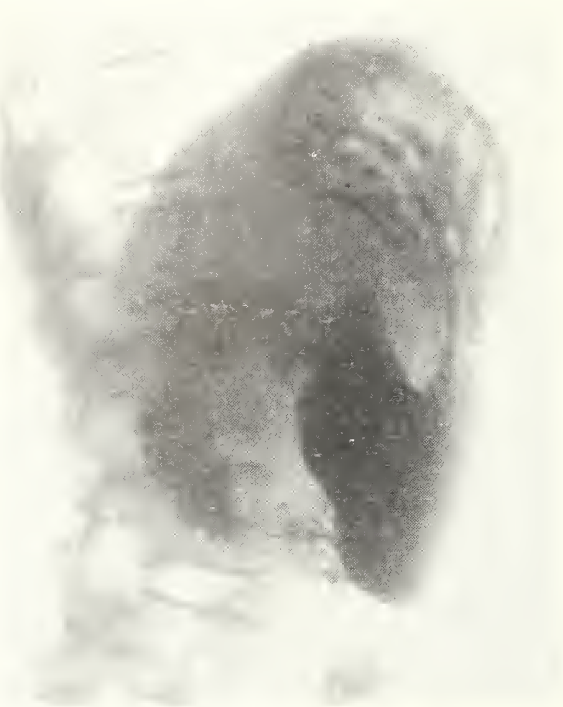

Fig. 2

Less frequent intra-abdominal causes of pain are disease of the gall bladder, pancreas and spleen. It is well to remember the abnormal EKG tracings may occur in individuals suffering from disease of the gall bladder and in other non-cardiac illnesses.

It is much easier to explain the presence of precordial pain which arises from disease of the intrathoracic viscera, other than the heart. That arising from complications of *syphilitic aortitis* have long been known. Pain arising from *dissecting aneurysm* is less frequently recognized but is becoming of increasing importance due to the greater number of individuals reaching the age in which its incidence may arise. Syphilitic aortitis will probably become an unknown disease eventually. Pain due to dissecting aneurysm is at the present too frequently confused with the picture of acute myocardial infarction. On the basis of location, intensity and radiation of pain it may not be differentiated from acute myocardial infarction. The pain fibers arising from the aorta and the heart pursue the same course. One should be alert to the possibility of aneurysm whenever the initial pain persists over the course of a few days and attention has also been drawn to the inconstant presence of a diastolic murmur resulting from functional aortic insufficiency. Also suggestive are evanescent neurological signs resulting from the interference of the blood supply to the spinal cord as a result of blockage of the intercostal arteries. Occasionally systolic murmurs over the back or abdomen and less rarely a periaortic friction rub have been described. Of course, later in the disease the presence of widespread pain in the back, abdomen or legs should suggest that myocardial infarction is not likely to be the cause of such phenomena. Very confusing are those instances in which the pain remains localized to the chest, and the T wave changes due to the hypertensive-arteriosclerotic disease are significantly altered by the presence of shock. In such instances differentiation may be impossible at a given time.

The frequent occurrence of *pulmonary embolism* and the readiness with which it is usually recognized will call for only brief discussion. The pain is due either to the infarction and the resulting pleuritis or to secondary changes in the dynamics of the circulation which in turn may effect the coronary circulation. The usual history of recent operative procedures, or bed rest, evidence of tenderness of the calf muscles and discomfort in the legs upon walking, and the characteristic pulmonary x-ray changes will determine the diagnosis.

Far less commonly recognized or discussed is the precordial pain arising from the *pulmonary hypertension*[2,3] associated with mitral stenosis, congenital heart disease and bronchial asthma. This pain is similar in all respects to that produced by coronary insufficiency, being caused by muscular effort with special reference to those factors which increases the pulmonary arterial pressure. The frequent occurrence of cyanosis in the diseases accompanied by increased pulmonary pressure and the occurrence of wheezing should help to alert one as to the source of the difficulty.

Easier of recognition are the conditions having precordial pain due to *acute inflammatory changes*, such as pleuritis, epidemic pleurodynia and rarely the mild substernal burning pain noted in acute bronchitis. Pneumothorax, mediastinal emphysema and the presence of diseased mediastinal lymph nodes can only be diagnosed on careful physical and/or x-ray examination. The characteristic crunching heard synchronous with the heart beat, if present, suffices for the recognition of mediastinal emphysema.

We would like to call attention to the not infrequent pain arising from the *esophagus*. Occasionally the severe pain associated with spasm of this organ is extremely difficult to differentiate from heart disease, unless one obtains the history of frequent previous attacks, usually associated with the beginning of eating. Favorable response to atropine, in the case of functional disorders, and the presence of concomitant disease of the esophagus found on x-ray examination will effect a correct diagnosis.

Pain arising from the heart. The history of precordial pain in disturbances of the heart is extremely interesting but will not be reviewed in this discussion.[4] It is sufficient to remind you of the characteristics of the pain of angina pectoris and of acute myocardial infarction. That of both are continuous, constrictive in nature. Angina usually is associated with those acts increasing the work of the heart and is relieved by rest, or by factors increasing the coronary flow. The pain arises from a disturbance between the demands and the supply of oxygen to the myocardium. This oxygen supply is determined by:

(1) The caliber of the coronary arteries,
(2) The blood pressure,
(3) The heart rate and
(4) The hemoglobin content per unit of blood.

The oxygen needs of the heart are governed primarily by the amount of work that it performs, and the increased demands made may either be

(1) Temporary, as in exercise, emotional stress, post-prandially or in tachycardias, or
(2) Permanent, as in aortic stenosis and hypertension.[5]

In the background there must exist the underlying factor of changes in the coronary vessels, though at times one may see very young individuals with paroxysmal tachycardial complaining of pain in whom it is hard to visualize the existence of coronary disease. Again in instances of chronic types of leukemia unassociated with secondary anemia one encounters instances angina of effort. It is within the experience of many that precordial distress may appear in very anemic individuals suffering with primary anemia and who lose this symptom with the restoration of a normal blood count.

In discussing cardiac pain, Parkinson[2] reminds us that there are two types, one arising from the heart and not due to coronary artery disease and the second one, that from coronary disease, or angina pectoris. Decrying the frequent use of the term angina pectoris as a symptom and not a disease he calls attention to Sir Clifford Albutt's definition of a disease as "no more than our concept and our name for a certain recurrent series of morbid events in many living bodies," and who insisted that angina pectoris was such. He ask, "Does a man with effort angina cease to have angina when he gets attacks at rest, or worse attacks from infarction?" He further decries the use of the term "precordial" as being too vague a term and prefers the term "sternal pain" although distress in the left supramammary area and extending into the left arm is also quite frequent. For localization he insists that the patient take one finger and outline the area of the pain and further reminds us of the variations in reference to the neck, jaw or into the larynx.

Certain basic facts are worthy of remembering in the differential diagnosis of angina. They are the role of emotion, the combination of exercise and eating, the almost constant relationship of exertion preceding and not immediately concomitant with the pain. Furthermore, of diagnostic help are relief by stopping the activity producing the discomfort and the usual relief by the taking of vasodilators. It may be true that the individuals with effort angina often live to see the occurrence of attacks when at rest. Unfortunately, when the onset of pain first occurs with no relation to effort, the problem becomes more difficult of solution. Also quite disturbing to the physician is the frequent occurrence of typical effort anginal patterns in persons having perfectly normal electrocardiographic tracings. Still more disturbing are those patients referred for electrocardiograms, and whose history is unknown to the interpreter. This report of a normal EKG is unfortunately accepted by the referring physician as final proof of the nonexistence of coronary disease. Many incidents are known where a normal pattern on one day was followed by a fatal attack on the following day.

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Discussion

JOSEPH E. ACKER, JR., M.D. (Knoxville). This morning Dr. Wood covered a very frequently seen and often quite puzzling problem. I enjoyed his discussion very much and wish to commend him on it.

This morning I should like to confine my discussion to one phase of chest pain. By far the most frequent type of chest pain seen in one's office is that of the left inframammary pain so often seen in younger individuals especially in the nervous female. It has been estimated by Bishop that twenty-five percent of all patients visiting in the office of a cardiologist have cardiac pain as a primary complaint and Harrison has estimated that pain in the chest is present in from fifteen to twenty-five percent of all adult patients who need hospital care. As has been noted by Dr. Wood all pain in the cardiac region does not originate in the heart. This is most certainly true of the type of pain which I shall mention.

One is so frequently confronted with a young or middle aged woman stating that she has pain in her heart. Further questioning usually elicits the fact that this pain is in the left inframammary or precordial region and occurs with no particular relation to effort as does true angina. This pain is sharp and shooting in character lasting only a matter of seconds at the most, though occasionally it may occur and last for several hours in a mild, dull aching manner. This pain may occur while the patient is in bed, sitting in a chair, performing usual household duties, and occasionally when performing unusual tasks requiring effort. It occurs most frequently when the patient is tired or agitated from some reason, may be present for a matter of days intermittently only to leave for months and return in much the same pattern as before when some similiar situation again precipitates it. This discomfort is also usually not relieved by nitroglycerin.

Physical examination is usually entirely within normal limits. A resting electrocardiogram is also normal and after standard and double exercise tolerance test the electrocardiogram continues to be normal. This particular patient presents no specific problem as a rule in diagnosis but is usually a greater problem in management. The patient is frequently convinced that he or she has heart disease and it is then the problem of the doctor to put forth a convincing argument to the contrary. So frequently if the statement that heart disease is absent is not made in a convincing manner these patients will migrate from doctor to doctor until they finally see one who agrees that organic disease is present. Then a full blown cardiac neurosis develops.

It is the responsibility of all of us who see this type of patient initially to follow through with a thorough examination and to acquaint the patient with the absence of organic disease. This condition is frequently associated with tender intercostal muscles and a reassurance that no heart disease is present but that the patient has merely an "inflammed muscle between the ribs" is sufficient to allay any apprehension. The important feature in the management of this type of patient is the reassurance that no organic heart disease is present.

Again I wish to thank Dr. Wood for his very interesting discussion.

PREFERRED PROCEDURES

The proper management of the spontaneous pleural effusion is so essential in terms of long range preventive medicine. This requires patience and understanding not only by the patient, but also on the part of the physician. The acceptance of prolonged rest for an asymptomatic condition is the measure of confidence placed in the family doctor.

TUBERCULOUS PLEURAL EFFUSION

ROBERT L. McCRACKEN, M.D., Nashville, Tenn.

The patient who presents himself with a serous pleural effusion presents many problems to himself and to the physician. First, *diagnosis:* the question of the etiology of the effusion,—this proves to be tuberculous in most cases. Second, *treatment:* a program of bed rest and possibly drug therapy must be outlined. Third, *salesmanship:* the physician's persuasive powers must frequently be used to the utmost in order to obtain the cooperation of a patient who has relatively few, if any, symptoms after the first few weeks of his disease. The average patient is most reluctant to devote the next twelve to eighteen months of his life to the cure of what appears to him as a very benign condition. Fourth, *social and economic adjustment:* these adjustments are of great magnitude to a family when medical care is required over a long period of time and this is especially true if the patient is the wage earner of the family.

Pleural effusion can and frequently does complicate active pulmonary tuberculosis. However, the remarks of this discussion will apply only to those cases of pleural effusion in which there is no demonstrable active pulmonary lesion.

The patient with pleural effusion usually gives a history of chest pain, anorexia, weakness, fever and frequently weight loss and night sweats. Chest pain may frequently have been intermittent in character for several weeks or months prior to the development of fluid. Severe chest pain, aggravated by deep breathing, usually disappears with the development of fluid. Since the fluid separates the visceral and parietal layers of pleura, these two layers no longer come in contact on deep inspiration.

Physical findings are dependent upon the quantity of fluid which is present. They are decreased expansion, impaired percussion note, decreased tactile fremitus, distant to absent breath sounds and mediastinal shift to the contralateral side. The greater the quantity of fluid, the more marked will be the change in physical findings. Diagnosis of hydrothorax is easily confirmed by X-ray examination and diagnostic thoracentesis.

Thoracentesis can be easily carried out under local anesthesia as a hospital or office procedure. One word of caution is in order concerning the technic of thoracentesis. Suction by the syringe should always be applied to the asipirating needle when it is being advanced towards the pleural cavity. If this is not done, the aspirating needle may be passed entirely through a thin layer of fluid and enter the pulmonary tissue. This produces the danger of spontaneous pneumothorax or pleural contamination due to the tear of parenchynal tissue. The quantity of fluid removed depends upon the quantity of fluid which is present in the pleural cavity. If there is a small amount of fluid, it will suffice to remove only enough for laboratory studies. If a large amount of fluid is present, up to 1,000 cc. of fluid may be removed at one time and aspiration repeated at daily intervals if necessary. Air should never be injected into the pleural cavity to replace the fluid which has been removed. The fluid is usually straw colored serous or serosanguinous fluid.

The following laboratory examinations should be made upon the aspirated fluid: cell count, differential leucocyte count, culture for pyogens, fungi and tubercle bacilli, and a cell block examination for malignant cells. X-ray examination following thoracentesis may show an unexpected pulmonary lesion. Tuberculin skin tests should always be made.

Primary or metastatic carcinoma, fungus and pyogenic infections of the lung are the most common etiological agents to be considered in the differential diagnosis.

If a patient has a positive tuberculin test, serous or serosanguinous chest fluid, a negative chest X-ray except for the pleural effusion, and the previously mentioned laboratory tests are negative, he should be considered and treated as having tuberculous pleural effusion even though efforts to isolate the tubercle bacillus on culture or guinea pig are unsuccessful. Acid fast bacilli have been reported as found in chest fluid in from 25 to 70 per cent of the cases of tuberculous pleural effusion.

The following case illustrates the need for adequate management. Recently a young white housewife was seen, who nine months previously had had a pleural effusion and had been treated by aspiration of the fluid and bed rest. At the end of six weeks, her chest X-ray was negative and a guinea pig inoculated with the pleural fluid was reported as negative. She was then permitted to return to her normal household activities and the care of a young son. X-ray examination nine months later showed an area of soft infiltration two centimeters in the apex of the lung where effusion had previously been found. This patient now has active pulmonary tuberculosis because her period of treatment for pleural effusion was too short.

The treatment aim in cases of tuberculous pleural effusion is twofold. First, the cure of the tuberculous lesion, and secondly, the restoration of normal lung function.

First, the cure of the disease. Bed rest is the foundation in the treatment for tuberculous pleural effusion, as it is for all other tuberculous lesions in the body. These patients should have a minimum of six months' bed rest, followed by another six months of gradually increasing exercise so that they may return to normal activities in twelve to fifteen months. Follow-up X-ray films should be made every three months for the first three years, every six months for the next three years and then once a year. Due to the fact that this condition usually responds excellently to conservative therapy, antibiotic therapy has been used infrequently. Under present schedules for antibiotic treatment, the development of drug resistant bacilli has been greatly reduced. In view of this, antibiotics will probably be used with increasing frequency in the future in the treatment of tuberculous effusion. If an antibiotic, streptomycin, is used, one gram every third day should be combined with daily para-aminosalicylic acid or isoniazid.

Secondly, restoration of normal lung function. An attempt should be made to keep the pleural cavity as dry as possible. This may require repeated aspirations if the fluid recurs. Occasionally, fluid will persist for a considerable period of time in spite of repeated aspirations; or a rather marked pleural thickening may result. Pulmonary expansion is markedly limited by such factors and decortication of the pleura should be considered.

The late incidence of active pulmonary or extrapulmonary lesions has been reported to be as high as 50 per cent in some series of cases of pleural effusion. From this it is readily recognized that ordinary pleural effusion, which is usually tuberculous, is not the benign disease which it is frequently considered to be. It should be treated as intensively as any active pulmonary or extrapulmonary lesion.

If the physician will inquire concerning previous attacks of pleural effusion in the cases of active tuberculosis of all types which he examines, he will soon be impressed with the marked frequency with which pleural effusion precedes active tuberculosis. Pleural effusion represents an early phase in the patient's tuberculous disease. It also represents a phase of the disease in which treatment can be carried out with excellent prognosis. The patient should not be deprived of this opportunity. The treatment schedule for any active case of tuberculosis, including pleural effusion, must be placed in months or years, not weeks. After a few weeks' treatment, the usual case of pleural effusion will be asymptomatic. It is then that the physician will be required to exercise the Art of Medicine to the greatest degree in order to obtain the cooperation of such a patient over a treatment period of twelve months or longer. However, if such a plan is followed, many patients will be prevented from having active tuberculosis in later years.

The Use of ACTH and Cortisone in the Treatment of Rheumatic Fever—A Preliminary Statement on the COOPERATIVE RHEUMATIC FEVER STUDY, American Heart Association Release.

Early in 1951 an international study of the treatment of rheumatic fever was set up with the object of measuring the relative values of ACTH, cortisone, and aspirin. This cooperative study, first of its kind in this field, is being conducted in 13 research centers in the United States, Great Britain, and Canada by the American Heart Association's Council on Rheumatic Fever in conjunction with the British Medical Research Council.

A preliminary report of the findings was made by a Panel of investigators engaged in the study at a joint scientific session of the Council on Rheumatic Fever and the American Rheumatism Association in Chicago on June 7, 1952. A summary statement, which follows, was presented by the Moderator for the Panel, Dr. David D. Rutstein, Boston, Chairman of the Committee on Criteria and Standards of the Council on Rheumatic Fever.

The text of the statement is as follows:

"A group of investigators in the United Kingdom, Canada and the United States initiated in January 1951 a cooperative study on the relative value of ACTH, cortisone and salicylates in the treatment of rheumatic fever and the prevention of rheumatic heart disease. The plan of study provides for uniform criteria for the diagnosis of rheumatic fever and for the degree of rheumatic activity required for the admission to the study, the random allocation of patients to the three treatment groups, a defined dosage schedule of the drugs for a fixed period of time, a specified period of observation following treatment and a long term follow up schedule. It also lays down precisely the frequency and type of clinical and laboratory observations to be carried out on each patient.

"To date, in all three countries, 658 cases have been admitted to the study and the analysis of rather less than half of these is the basis of the preliminary report. These cases were analyzed for changes in those symptoms, signs and laboratory observations usually considered important in evaluating the course of acute rheumatic fever. In the type of cases admitted to the trial and with the regime of treatment laid down, it appears that individual symptoms, signs or laboratory observations may have been affected more favorably by one or another of these three drugs, but no consistent pattern is evident. In short, no firm conclusions can at present be drawn concerning the drug most effective in the control of the acute illness. The cases have not been under observation sufficiently long to provide data on the prevention of rheumatic heart disease.

"Admission of new cases to the study will be brought to an end later this year. It is anticipated that a total of 750 cases will be available in all three countries for complete and detailed analysis of the effects of the drugs on the acute course of the disease and later, after adequate follow up, on the prevention of rheumatic heart disease."

The investigators who participated in the Panel included: Professor A. Bradford Hill and Dr. Eric G. L. Bywaters, representing the British investigating centers; Dr. Albert Dorfman, La Rabida Jackson Park Sanitarium, Chicago; Dr. Edward E. Fischel, College of Physicians and Surgeons, Columbia University, New York; Dr. James E. Flett, Jr., Denver General Hospital, Denver, Colorado; Dr. John D. Keith, Hospital for Sick Children, Toronto, Canada; Dr. Currier McEwen, New York University-Bellevue Medical Center, New York; Dr. Benedict F. Massell, House of the Good Samaritan, Boston; and Dr. Charles H. Rammelkamp, Francis E. Warren Air Force Base, Cheyenne, Wyoming.

Funds for the study are being supplied by the National Heart Institute of the U. S. Public Health Service, the British Medical Research Council, the hospitals and medical centers in the local communities involved in the study, the Armed Forces Epidemiological Board, the United States Air Force, the American Heart Association, and the Canadian Arthritis and Rheumatism Society. The supply of ACTH required for the study was given by Armour and Company, and the cortisone supply was given by Merck and Company.

CLINICOPATHOLOGIC CONFERENCE

Baptist Memorial Hospital*

Mrs. W. V., age 45, was taken to Campbell's Clinic following a collision between a taxi and an automobile. Here x-ray films revealed a fracture of the right femur. The patient stated that she was six months pregnant, and because of this she was transferred to this hospital about twenty-six hours after the accident.

On admission to the Baptist Memorial Hospital on April 10, 1952, she did not appear in acute distress. Her blood pressure was 100/60, and her pulse was 110. The abdomen was soft with no significant tenderness. The lower half revealed a firm mass which was regarded as arising from the pelvis; it reached the umbilicus. The mass was somewhat nodular. There was bright red blood in the vagina; the cervix was firm and closed. The cul-de-sac was negative. Peristalsis was present.

The admission blood work showed a red blood count of 2,300,000 with 8.4 grams of hemoglobin and a white blood count of 8,350. The urine showed a one plus albumin but was otherwise negative. X-ray examination did not reveal the fetal skeleton, and a test for pregnancy was negative.

The patient had been under the care of a physician for pregnancy. Her health had been good. In 1947 she was in this hospital because of a fractured femur and was treated with a cast and traction. In 1949 she was operated on in this hospital for a stomach condition, prior to which she had been in very bad health and for weeks had not been able to retain food. The x-ray examination revealed an obstruction to the emptying of the stomach. A subtotal gastrectomy was followed by greatly improved health. The pathological report on this specimen was, "Scarring of pylorus with stenosis and chronic gastritis."

On January 10, 1952, after ample preparation, an open reduction and extra-medullary nailing was done. A large hematoma was evacuated at that time. The convalescence was interrupted by an infection of the wound, but the patient was discharged on February 25, 1952, in good condition. She was instructed to return in a few weeks for an operation for the tumor.

On re-admission the patient stated that she had first noticed the abdominal swelling in July, 1951. At that time she became nauseated and vomited occasionally. The menstrual period continued for one month with either a flow or spotting. In September she was diagnosed as being pregnant. She thought her clothes became too small as her abdomen increased in size. Up until the time of the accident in January she continued under the care of a physician for prenatal care. While she was in this hospital in January she had an excessive menstrual flow. More recently she had had spotting of blood.

The abdominal and pelvic examinations were as previously described. Her general condition was considered good. The admission laboratory work showed a red blood count of 2,800,000 and a white blood cell count of 9,100.

A pelvic laparotomy was performed on April 10, 1952. The convalescence was uneventful, and on April 25, the patient was discharged.

Discussion

DR. WILLIAM P. MAURY: When Dr. Schreier gave me this case to discuss, I thought it looked very simple. However, the further I go into it, the more ramifications there appear to be, and the more difficult it becomes to arrive at some definite conclusion. This case brings up several points in the differential diagnosis. The first one, of course, is the fact that this woman was admitted to the Baptist Memorial Hospital from Campbell's Clinic with a fracture of the femur following a collision. At that time a diagnosis of pregnancy had tentatively been made due to a mass in the pelvis, amenorrhea and an occasional scanty, spotty, bloody discharge since the date of the last menstrual period, which was July of 1951. Thus in the differential diagnosis of this case the first question that comes up is whether or not this woman is pregnant. The history for pregnancy was negative. The physical findings show the uterus apparently of normal size (as no mention was made of the size or movability of the uterus in differentiating it from the pelvic mass). No fetal skeleton was noted on x-ray; the pregnancy test was negative; and most important of all the size of the mass had not enlarged since January 1, 1952. All of these findings would tend to further eliminate the possibility of pregnancy. Do you have the x-rays, Dr. Thompson? No definite x-ray report was given to me except that no fetal skeleton was noted. There was a mass in the pelvis extending quite high. Is that right, Dr. Whiteleather?

DR. JOHN E. WHITELEATHER: It looks that way to me, Dr. Maury. Yes.

DR. MAURY: The pregnancy test as stated before was negative. From the date of amenorrhea, which was approximately July of 1951, until the x-rays were made over six months had lapsed. This x-ray would certainly have shown a fetal skeleton by this time. One question in regard to this case I would like to ask was whether or not these were pathological fractures that this patient had in January of 1952 and in 1947 when she had a fracture of the femur. Were they of the same extremity?

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*From the Baptist Memorial Hospital, Memphis, Tenn.

DR. HARVEY THOMPSON: They were not pathological.

DR. MAURY: The only thing that the history reveals was that since the subtotal gastric resection she had not had any disturbances that could be related to the stomach condition. The nausea and vomiting reported are coincident with the diagnosis of pregnancy which the doctor made while she was in her home town. There is no history of weight loss, weight gain, or cachexia. There is also no note made of malfunction of the gastro-intestinal tract, stool examinations that showed any occult blood, evidence of gall bladder disease, or liver dysfunction. Stool examinations might possibly have revealed the evidence of intrinsic or extrinsic pressure on the lower bowel. There was also no mention made of her menstrual periods prior to the onset of this present illness in July, 1951. All in all there have been a lot of negative findings which, when added together, throw some light on the problem. One other question that I would like to ask is: Was any note made regarding the condition of this patient's pelvic organs at the 1949 operation, the time a sub-total gastrectomy was done? Was it explored? Were any findings noted?

DR. PHIL C. SCHREIER: No, there is no note made on the records of the pelvic findings.

DR. MAURY: In my opinion another significant ommission was whether or not any fluid was noted in the peritoneal cavity or in the chest at any time while she was in the hospital in 1949.

DR. SCHREIER: There is no record of it.

DR. MAURY: A great many of these findings have been negative, and from the history and the physical findings there is mainly a repetition of findings. On pelvic examination if this were an ovarian tumor and the cervix was pink, firm, and closed, there should have been possible at least some differentiation of the uterus from this pelvic mass unless this tumor involved the uterus. No mention was made of this. I assume from the physical examination that because the cervix was described as pink and firm, and although the uterus was not felt, it was probably incorporated in the pelvic mass.

The differential diagnosis in this particular case then resolves itself around a pelvic tumor of some type. I think pregnancy has been adequately eliminated. Pelvic tumors may be of several types. First of all, the most likely in a forty year old woman who has had some irregular bleeding with some amenorrhea and a definite pelvic mass is a fibroid although the mass apparently has not grown extensively as noted in the slow growth between January 10 and April 10, 1952. The pelvic findings on both of these examination dates are described as essentially the same. Therefore, this mass seems to be some type of solid tumor.

Another possibility would be some type of ovarian tumor. First, there would be the cystic ovarian tumor such as serous cystadenoma, pseudomucinous cystadenoma, or a dermoid, which at times is rather markedly cystic but can show firm nodules as was described in this particular case. The other types of tumors would include granulosa cell, leuteoma, arrhenoblastomas, or the functional ovarian tumors. This patient had no signs of any functioning tumor. It is often a little difficult to determine any function of this type in an elderly person whose menstrual cycle has already been set up. It is more noticeable after the menopause where the functioning tumor will reinstitute menstruation or in the child when it will cause the secondary sex changes to become more pronounced, such as by the onset of menstruation and the development of public hair and breasts. There was no history of any such changes in this particular case. The arrhenoblastoma or the granulosa cell tumor would be pretty well eliminated on the history and the findings. The other types of tumors that could be present would be the metastatic tumors to the ovary such as a Krukenberg tumor. Still another type would be the metastatic omental tumor which would follow a lesion of the ovaries such as a papillary cystadenocarcinoma with marked enlargement of the omentum. Sometimes these omental metastases become extremely large, as large as a person's head, and would give a movable, firm, solid tumor such as was described here. Another type of tumor would be one arising in the large intestines. A malignancy arising there would hardly be as large as this tumor was described and as was shown by x-ray. If it had developed in the bowel, there surely would have been some bowel disturbance or some blood in the stools or some evidence of extrensic or intrinsic pressure on the colon. Another tumor could be a retroperitoneal sarcoma. This would be fixed to the pelvic cul-de-sac and to the pelvic viscera in all probability, and the cul-de-sac was described as being free.

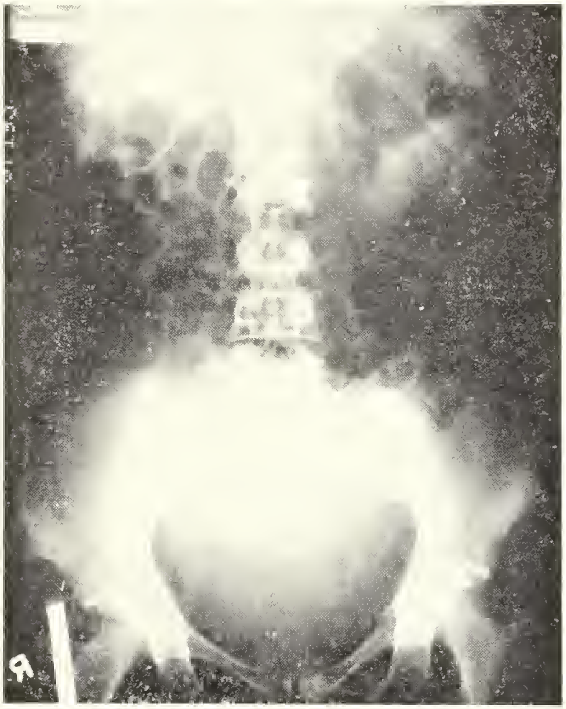

FIG. 1. X-ray view of abdomen.

The amenorrhea, slight spotting and scanty menstruation could go with several types of tumors. It would be ideal with a fibroid, for example, because it may cause this type of findings particularly in a woman of this age. The solid tumors of the pelvis seem to be the ones most likely in this case. It is necessary now to determine through a process of elimination what type of tumor gives this kind of history. Although the gastric lesion was described as pyloric stricture and chronic gastritis microscopically, I think one of the best possibilities would be a Krukenberg tumor. Such tumors are usually metastatic from the intestinal tract, arising most often from a primary carcinoma of the stomach. In this case the tumor originally arose from the pylorus. So my first diagnosis would be a Krukenberg tumor. My second diagnosis would be a solid tumor of the ovary, namely, a fibroma. Both tumors will cause a chronic, severe anemia. Each time this patient's blood count was done, it was low and it showed evidence of a rather severe, chronic type of anemia. Her general appearance was described as being generally good. If she had a metastatic lesion other than a Krukenberg tumor, there would have been more evidence of cachexia and general malnutrition. Therefore, my first diagnosis is Krukenberg tumor, and the second is fibroma of the ovary. Do you have any slides there, Dr. Rodda, that you would like to show?

DR. SCHREIER: I think he did very well, don't you? Now, we are going to have rebuttal of his diagnosis, if there are some who might not agree or perhaps want to point out reasons to substantiate this diagnosis. We have heard from a gynecologist, how about the general surgeons? They are supposed to know something about the pelvic signs, especially of a tumor which rises from the pelvis and extends into the abdomen.

DR. R. M. POOL: Dr. Schreier, Dr. Maury has covered this case completely as far as the pelvis is concerned, but the case makes me wonder if this could be something besides a pelvic tumor. The only other thought that I could add is that this lesion might possibly be something not really from the uterus or adnexia. I would strongly suspect a mesenteric cyst.

DR. SCHREIER: All right, now. Someone else? Is there an internist here who would like to point out anything about the history that would be helpful in making a diagnosis? You internists are great at digging out fine points in the history the surgeons and gynecologists do not emphasize as a rule. You look so carefully for them.

DR. MORRIS PASTERNACK: Still along surgical lines is the possibility of a hematoma somewhere in the broad ligament or possibly a retroperitoneal one. That is the only thing I could add here.

DR. SCHREIER: We don't want you to come to a conclusion too quickly. We want to get all of the meat out of this we can. Dr. Whiteleather?

DR. WHITELEATHER: I wanted to ask a question along the same line. I noted on the x-ray here that there were fractures of the inferior ramus on the side opposite to that which had the intramedullary nail. I was wondering, therefore, whether the finding could be a rupture of the bladder or a pelvic hemorrhage. I don't remember if there was any blood evacuated around the site of the fracture.

DR. SCHREIER: You mean that it is actually a hematoma at the site of the fracture.

DR. DAVID SCHEINBERG: I would like to say a word about the Arkansas physician. Perhaps he may have the diagnosis. You know this woman stopped bleeding suddenly, and she had nausea and vomiting. I believe she had an abdominal ectopic pregnancy with remote organization.

DR. SCHREIER: Can someone else add to the confusion? We are building up a real state of confusion. Does anyone else have something to add?

A DOCTOR: Would a negative pregnancy test rule out an ectopic pregnancy?

DR. SCHREIER: No, it would not rule out an old ectopic pregnancv with a hematoma. The old fracture, Dr. Whiteleather, was not mentioned on the report. I think they were mostly concerned with the recent fractures. If there is no further discussion, we will have Dr. Snoddy present the pathological findings.

DR. WILLIAM T. SNODDY: The specimen received in the laboratory was a tumor mass which measured about 15 cm. in its greatest length. It was an ovoid, somewhat kidney-shaped mass which had the shape of an ordinary ovary only magnified. It was said to have come from the right adnexal region. The mass weighed 1,025 grams. It had a fairly smooth surface. However, it did appear slightly gelatinous. There were a few adhesions on the surface. On the cut surfaces the tumor was solid in most areas and had a somewhat whorled arrangement that we sometimes see in a leiomyoma and also in a fibroma of the ovary. Also, in the gross it suggested a sarcoma, even though such tumors of the ovary are exceedingly rare. There were two cystic spaces within the mass,—one measured about 6 cm. in diameter and the other 3 cm. in diameter. These contained a slight amount of necrotic tissue and mucoid material. In the gross we actually did not have too good an idea about the diagnosis. We suggested that it might be a fibroma or sarcoma. In looking back at it one should think that it would likely be a Krukenberg tumor since these tumors usually are described as being kidney-shaped and having the same general characteristics and contour of ovaries.

Microscopically, there were a few epithelial masses scattered here and there between abundant and often edematous stroma, and we began to wonder if this could by any chance be a metastatic carcinoma. We knew at the time that this patient had had a gastrectomy and that the diagnosis had been benign ulcer. After some difficulty we learned that the patient had had the gastrectomy in this hospital and had been admitted under a different name. On further study of our sections of the tumor mass we became convinced that this was undoubtedly a carcinoma. (Figure 2) This is a section from the ovarian mass. As you can see here, there are fairly definite, small, acinar arrangements of epithelial

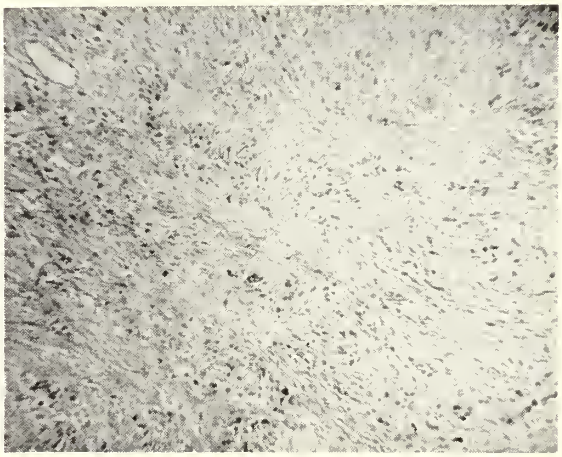

FIG. 2. Krukenberg tumor of ovary (B. M. H. 52-S-2976) (x100).

cells while others are scattered diffusely and singly through the stroma. Some of these are signet ring cells. Then, we felt we were dealing with a metastatic adenocarcinoma to the ovary. A review of the original sections of the stomach revealed to our surprise a diffuse but small anaplastic carcinoma in the base of an ulcerated lesion. The next lantern slide (Figure 3) is made from a region in the musculature of the stomach where the greatest concentration of carcinoma cells was seen. This missed gastric carcinoma immediately answered the question of what constituted the primary site for the metastases to the ovary. Our final diagnosis on the ovarian mass was Krukenberg tumor secondary to a primary carcinoma in the stomach.

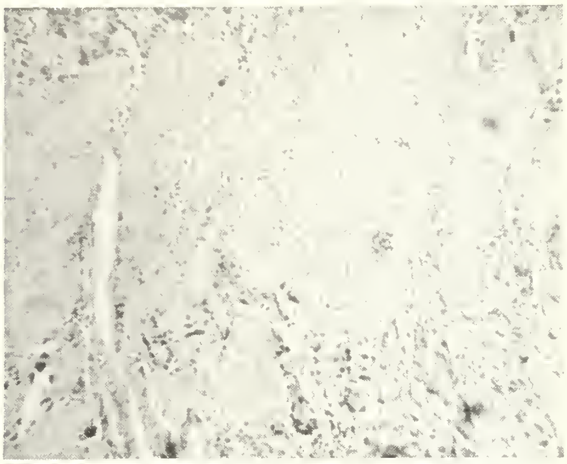

FIG. 3. Small clusters of carcinoma cells infiltrating the musculature of the stomach (B. M. H. 49-S-4095) (x100).

DR. SCHREIER: Thank you, Dr. Snoddy. Now we will have rebuttal here for questions. Dr. Trumbull, I wish you would add some concluding remarks, would you?

DR. MERLIN L. TRUMBULL: Our department was embarrassed when we reviewed the original stomach sections. The illustration that Dr. Snoddy showed you was a good one and was a highly selected field. As a matter of fact, there was very little tumor in the several sections from the original specimen from the sub-total gastrectomy done three years ago. We do see an occasional gastric carcinoma that is very obscure, and unless many sections are made, we may miss it even though several sections of the lesion were made. So, Dr. Schreier, the protocol was reported correctly in that it had been called a benign lesion. The only other comment that I would care to make is that we have been impressed during the last few years with the frequency of carcinoma of the stomach in women of the fourth and fifth decades of life. Most of these have been of a diffuse, infiltrating variety. The fully developed carcinoma of this type is the so-called linitis plastica tumor. One other lesion I learned from this case is the observation that a woman in this age group presenting a hard, pelvic mass and giving a history of prior gastric surgery or gastric symptoms should make us place the possibility of a Krukenberg tumor in our differential diagnosis. If prior surgery has been performed on the stomach, the section from the stomach ought to be reviewed for the possibility of an obscure carcinoma, which may have been overlooked, as it was in this case.

Direct Cardiac Surgery in the Treatment of Congenital Pulmonary Stenosis, Brock, R. C., Ann. Surg. 136:63, 1952.

Despite the immediate good results of the Blalock-Taussig anastomotic procedure in congenital pulmonary stenosis there are certain objections to its use: (1) It is an indirect operation which does not correct the obstruction in the heart. (2) Another abnormality, the artificial ductus, is added to the already abnormal circulation. (3) Due to platelet deposition at the site of pulmonic stenosis there is a tendency to progressive fibrosis and ultimate complete occlusion of the stenotic zone which with the addition of a Blalock or Potts anastomosis comes to resemble the circulatory pattern of truncus arteriosus.

Direct relief of pulmonary obstruction would permit an increased blood flow to the lungs and at the same time reduce the volume of venous blood ejected into the aorta. By this means the abnormal heart condition is rendered less complex instead of more complex. Direct relief of the obstruction within the heart is possible in practically all types of congenital heart disease associated with pulmonic stenosis except tricuspid atresia and the severe forms of pulmonary atresia.

In valvular pulmonic stenosis with a closed ventricular septum pulmonary valvulotomy is the only rational therapy and gives excellent results with a low operative mortality if performed before severe secondary changes become established. In the tetralogy of Fallot there is stenosis of the pulmonary valve itself in 40 to 50 percent of cases. Brock has performed pulmonary valvulotomy in 39 cases of tetralogy of Fallot with 3 deaths. Results have been good or excellent in 29 of these cases and fair in seven. The incidence of infundibular stenosis in tetralogy of Fallot is somewhat higher than that of valvular stenosis and in a small proportion the two conditions co-exist. It is erroneous to assume that in infundibular stenosis the obstruction is a long tubular constriction. Rather, as is apparent in the living heart at operation, the obstruction in infundibular stenosis is usually diaphragmatic and lends itself to relief by resection with a cutting punch inserted through the ventricular wall. Brock has performed infundibular resection in 39 cases of tetralogy of Fallot with 7 deaths. In 10 cases pulmonary valvulotomy was combined with infundibular resection with no fatalities. Results have been good or excellent in 28 cases and fair or poor in four.

In 223 cases of congenital pulmonary stenosis Brock has done an anastomosis in 112 and a direct procedure in 111. He states that the mortality and morbidity of the two types of operation are comparable and that the initial results of the direct procedures are just as good as those obtained with a systemic-pulmonary anastomosis. (Abstracted by Dr. H. William Scott, Jr., Nashville, for the Middle Tennessee Heart Association.)

Care of the Postpartum Cervix, Weiner, A. E., and Nelson, H. B., Am. J. Obst. & Gynec., 62:1106, 1951.

Because of the frequent appearance of cervical erosion as a complication of the late postpartum period, a study was organized in the postpartum clinic of the Boston Lying-in Hospital to evaluate the efficacy of various types of therapy. This paper presents data on 101 patients with postpartum cervical erosions. During eight months covered by this study, the incidence of postpartum erosion at the Boston Lying-in was 10 per cent. Other clinics have reported as high a percentage of erosion as 81 per cent. This difference is undoubtedly due to definition.

All patients were examined at the eighth postpartum week and the cervix biopsied in those with erosions to rule out the presence of malignancy. This group returned at the 10th postpartum week for definite treatment of the cervix. No patient was included in the study who had an erosion less than 1.5 to 2 cm. in width, and 75 per cent of those studied extended circumorally from 2 to 4 cm. At first, patients were assigned in rotation to each of four treatment groups: Group N, a control group which received no therapy; Group S, a group treated by vaginal instillations of Triple Sulfa Cream twice a day; Group C, a group treated by electrocauterization alone; and Group C and S, a group treated by cauterization and vaginal instillations of Triple Sulfa Cream twice a day. However, it became evident, after three months, that the results in Groups N and S were too poor to warrant further study.

The 20 patients who comprised the control group, Group N, were followed for an average of 9.5 weeks and only six showed partial healing. It would appear that when a moderate to severe cervical erosion was present at the 10th postpartum week, spontaneous healing did not occur thereafter.

The entire area of erosion on the exocervix was lightly cauterized with the hot cautery. The aim was to level exuberant granulations without destroying the submucosa by too vigorous application of heat. This technic resulted in the complete healing of the exocervix. Past experience has shown that mere striping of the exocervix leaves areas of erosion which cannot epithelialize because of high granulation tissue.

The endocervix was treated cautiously to avoid stenosis. Usually striping the endocervix once at six and 12 o'clock was sufficient to correct minor degrees of eversion. The cautery was also applied at three and nine o'clock whenever considerable gaping of the cervical os was present.

Ectropion of the endocervix was observed in many patients who had suffered an intrapartum laceration of the cervix. When untreated, the patulous and everted endocervix remained chronically inflamed and produced a copious mucoid discharge. Striping of the endocervix helped greatly in restoring the disrupted cervical os to a nulliparous appearance.

Thirty-six patients were treated by cauterization alone. Thirty-one were completely healed in an average of 7.8 weeks. It was presumed that cauterization reduced exuberant granulations and allowed resumption of epithelial ingrowth from the periphery of the erosion.

Thirty patients were treated with cauterization and twice daily instillations of Triple Sulfa Cream. The erosions in this group were all healed in an average of 3.8 weeks. Thus, when sulfa cream was used in conjunction with cauterization, the average healing time was half that of cauterization alone. It was thought that this reduction in healing time resulted from the control of secondary infection in the cauterized cervix. (Abstracted by Milton Smith Lewis, M.D., Nashville, Tennessee.)

The President's Page

WE HAVE THE SOLUTION—LET'S USE IT *FULLY*

Dr. Smith

For twenty years the medical profession has played an offensive role. Many victories have been won in the battle against socialism in the broad aspects. But offensive strategy alone cannot continue to win. We must now offer sound and sensible programs which will *defend* the gains we have made, which will *defend* the American family's budget against the cost of unexpected illnesses.

The economic problems related to the practice of medicine cannot be solved by clinging to the philosophy that *every* suggestion to solve this problem is socialism. We know that *compulsory* health insurance is socialistic, but there are doctors who call the unfettered and competitive voluntary health insurance programs, such as The Tennessee Plan, a form of socialism. That view I cannot see.

In the first place, we Americans use insurance to protect all other things we treasure. Then why not use that same sound principle to protect the most precious commodity of all—our health.

It is quite evident that whatever the solution may be, to the financing of health protection, it must emerge from the states; from State Medical Associations with their local Societies supporting the programs and actively, fully participating in them.

That being true, shall we in Tennessee solve this problem by establishing a formal program and pattern of voluntary health insurance? Or shall we fail to exert the leadership and let the problem be solved elsewhere? And you know where! If we elect the latter course, then we must prepare ourselves to accept the consequences without recourse.

I, for one, believe that the medical profession in Tennessee will furnish the leadership needed to help solve the problem of the present. This great state has supplied such leadership in the past in crucial times. The people are looking to the Medical profession now, through its formal organizations, to effect a sound plan of voluntary health insurance.

Let's imagine ourselves as heads of homes made up of four to six persons. The breadwinner must support the five dependents on $4,000 a year, or less. An unexpected illness hits that home and there is no budget coverage for the cost of medical and hospital treatment. The answer to the problem, if the breadwinner is a thinking man, is a health insurance policy. We have made such a policy possible through The Tennessee Plan. The response has been good. Approximately 400,000 Tennesseans are now covered by the Plan.

Then what is the hitch? It is this: the original plan never brought in more than 1,730 physicians. The plan now in the process of expansion and liberalization has brought in approximately 1,100 signatures. Two large specialty groups still have not signed up to any appreciable extent. We sincerely hope they will see their way clear to do so.

We doctors are a part of a daily drama. This drama can be one of hope rather than despair. It is up to us to make a really sound insurance plan work for all the people. God grant that it may never be said that in Tennessee we failed. Edmund Burke, the English philosopher, once said: "The only thing necessary for the forces of evil to triumph in this country, is for enough of the good people to *do nothing*."

Daugh W. Smith

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AUGUST, 1952

EDITORIAL

NEW DRUGS FOR HYPERTENSION

Possibly the release of hexamethonium chloride and hydrazinophthalazine by the Federal Food and Drug Administration for general use has been a bit premature. The use of these drugs alone or in combination has been under observation by students of hypertension in both Great Britain and in this country. However, your editor after listening to the disagreement among astute observers at a meeting some months ago, both as to their effectiveness and untoward side effects, questions whether these drugs should be made readily available at this time.

Hexamethonium given orally is effective in blocking the efferent pathways of the sympathetic nervous system at the ganglia; 1-hydrazinophthalazine hydrochloride is adrenolytic and sympatholytic. The dosage of hexamethonium must be based on its effects on the level of the blood pressure and on its side effects due to the release of parasympathetic stimulation such as blurred vision, dryness of the mouth, anorexia, nausea, heartburn, constipation and/or diarrhea. The untoward effects in the sympathetic block of course relate to the symptoms of hypotension,—namely, postural hypotension. Prostrating hypotension and ileus have been serious degrees of the side effects of hexamethonium requiring, according to reports, gastric suction and the use of cathartics and bed-rest. In the older patients having arteriosclerosis deaths or serious clinical manifestations have been encountered following the lowering of blood pressure. Myocardial ischemia has been made evident by angina. Hemiplegia and uremia have been the evidences of decreased blood flow in brain and kidneys.

Hydrazinophthalazine hydrochloride seems to produce its blood pressure lowering effects in blocking pressor reflexes. (There is still some question as to the mode of action of this drug.) It is less effective than hexamethonium. Headache, nausea and vomiting are the toxic manifestations.

Most investigators have combined the use of both these hypotensive drugs to get a better effect in dropping the pressure.

The effects of these hypotensive drugs are those of a "medical sympathectomy." When the drugs are discontinued the hypertension recurs. Their use is justified only after a most careful study of the patient. Jointly or singly they are dangerous in arteriosclerotic persons as was indicated above, because of decreased blood flow. However, even in the younger patient having malignant hypertension, too rapid a reduction of blood pressure has been reported as leading to uremia, cerebral vascular accidents and myocardial infarction. Also it has been found that too rapid withdrawal of the hypotensive drugs in cases of malignant hypertension has ended with uremia and apoplexy.

It is the opinion of your editor that much more clinical data must be collected before these hypotensive drugs can be recommended for general use. If adequate case study is possible and if the patient can be carefully followed, the use of these drugs is justified in a more or less experimental fashion. (Anyone tempted to use these drugs should read more on the subject than what appears in the brochure sent out by the drug house.*)

R. H. K.

✶

DOCTOR-PATIENT RELATIONSHIP STILL HAS RECOGNITION

Like a shower on a hot dusty summer day comes a decision in these Fair Deal days of 1952—by the judicial branch of our government. It affirms one of the tenets of the practice of medicine—basic since the days of Hipprocrates. A third person or an equivalent *must not* influence decisions which lie only in the province of these two principles.

The U. S. Supreme Court in a seven-to-one decision upheld the Oregon State Medical Society in its actions which the government had labelled as a monopoly. In 1936 the Oregon State Medical Society opposed contract practice of medicine by private firms and commercial insurance companies on ethical grounds—namely that third parties interfered with doctor-patient relationships. The Society began to provide such service on a non-profit basis. Being successful, suit was brought against the Society by the government on the grounds of monopolizing the provision of prepaid medical care.

After being carried up through the courts to the Supreme Court, the case was settled in favor of the Society. Pertinent quotes from the decision were: "Objections of the organized medical profession to contract practice are both monetary and ethical. Such practice diverts patients from independent practitioners to contract doctors. It tends to standardize fees. The ethical objection has been that intervention by employer or insurance company makes a tripartite matter of the doctor-patient relation. Since the contract doctor owes his employment and looks for his pay to the employer or the insurance company rather than to the patient, he serves two masters with conflicting interests. In many cases companies assumed liability for medical or surgical service only if they approved the treatment in advance. There was evidence of instances where promptly needed treatment was delayed while obtaining company approval, and where a lay insurance official disapproved treatment advised by a doctor." . . . "Since no concerted refusal to deal with private health associations has been proved, we need not decide whether it would violate the antitrust laws. We might observe in passing, however, that there are ethical considerations where the historic direct relationship between patient and physician is involved which are quite different than the usual considerations prevailing in ordinary commercial matters. This Court has recognized that forms of competition usual in the business world may be demoralizing to the ethical standards of a profession."

This is an important decision. It holds inviolate an age-old tenet of medicine. This decision may offer a weapon against legislation which is planned to get state medicine in by the back door. Bills which would be contrary to this decision, because a governmental agency would represent a third party, have appeared in Congress in the past.

R. H. K.

✶

POSTGRADUATE INSTRUCTION BY TELEPHONE SEMINAR

The Kentucky State Medical Association is the latest organization to attempt to reach more of its members for postgraduate instruction. The most difficult problem of solution in postgraduate education for the doctor in rural communities is to get instructors and physicians together. So often the medical society in a rural area is so small that it hesitates in asking, or has difficulty in getting a busy specialist or teacher to meet with it for instruction. The telephone offers a possible answer to this matter of getting instructor and pupil together. Several very small county societies can band together to defray the cost of "piping in" such a program for their area.

In the telephone instruction in Kentucky, the program originated at the University of Louisville School of Medicine and was presented by members of its staff. Each physician registering for the course received a manual containing illustrations to offer a visual aid during the talks coming over the loud speaker. (The State Association of Texas has used slides in color to be shown during the discussions.)

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*Grimson, K. S., Organ, E. S., Rowe, C. R., and Sieber, H. A.: Caution with Regard to Use of Hexamethonium and "Apresoline," J.A.M.A., 149: 215, 1952.

In the experience in Kentucky, twenty-eight county medical societies took advantage of telephone instruction. The audience of doctors reached thereby was the largest ever to hear scientific presentations in Kentucky. This was provided at a cost of about $1.75 per doctor attending. During the coming year the Kentucky State Medical Association plans four sessions by telephone instead of the three of last year.

The telephone thus offers another medium whereby the advances in medicine, and reviews of accepted knowledge may be brought to the doctor away from the metropolitan areas. It cannot replace the personal contacts, and the questioning and answering at the medical meeting or postgraduate assembly, but it offers great advantages for "in-between" continued instruction.

R. H. K.

* * *

PROPHYLAXIS AGAINST OPHTHALMIA NEONATORUM

Inquiries have arisen concerning the legality of using antibiotic preparations in lieu of silver salts in the eyes of the newborn for prophylaxis against opththalmia. A new ruling by the Commissioner of the Tennessee Department of Public Health is published in the section on Medical News in Tennessee in this issue. This lays down the rules under which a deviation from the law is permitted.

* * *

SPECIAL ITEM

The Revised Tennessee Plan Fee Schedule

For purposes of copyrighting, permanent recording, and particularly for providing our members with a ready reference copy of the Revised Fee schedule, we are publishing the new schedule herewith:

THE TENNESSEE PLAN

Master Schedule of Indemnities

Including usual pre- and post-operative hospital care

I. Multiple Procedures

When more than one operation is performed at one time, payment will be made for each in accordance with this Schedule, subject to a maximum total of $200. Furthermore, the maximum total with respect to all operations due to the same or related cause which are performed during a continuous period of disability shall be $200. For this purpose all procedures performed through the same incision shall be considered one operation, and operations that are not separated by three months shall be deemed to have been performed during "a continuous period of disability."

II. Unlisted Procedures

In addition to the procedures listed in this Schedule, amounts shall be payable for any other operations. The maximum amounts for such procedures shall be determined in amounts consistent with those listed.

GENERAL SURGERY

Infections and Traumata

Abscesses, soft tissue, incision and drainage, furuncles excepted	$ 10.00
Abscesses, deep, cervical and ischio-rectal	25.00
Carbuncle	25.00
Ulcer, surface excision	10.00
Tendon, repair, one primary	65.00
Each additional	25.00
Maximum	150.00
Septic finger (tendon sheath involvement)	50.00
Septic hand (tendon sheath and compartments)	100.00
Lacerations, minor	10.00
Lacerations, extensive, including debridement	25.00

Cysts

Cyst, sebaceous, removal	$10.00
Pilonidal cyst or sinus	75.00
Thyroglossal cyst, removal	100.00
Branchial cyst, removal	100.00

Tumors

Tumors, benign external, removal	$10.00
Tumors, benign deep, removal	25.00
Epulis, removal	15.00
Parotid tumor, removal	100.00
Epithelioma of face, surgical removal	25.00
Cancer of tongue (resection or removal)	100.00
Same with neck dissection	150.00
Cancer of lip (local operation)	35.00
Same with neck dissection	150.00

Biopsy

Biopsy, superficial	$ 5.00
Biopsy, bone or bone marrow	15.00
Biopsy, needle aspiration	5.00

Glands

Glands, superficial, removal	$ 10.00

Dissection, glands of neck, deep chain, unilateral	100.00
Bilateral	150.00
Radical axilla or groin, unilateral	100.00
Bilateral	150.00

Thyroid

Thyroidectomy, subtotal	$125.00
Thyroidectomy, two-stage, subtotal (with or without ligation), complete procedure	150.00
Parathyroidectomy	150.00

Breasts

Breast abscess, drainage	$ 25.00
Breast cyst or abscess, aspiration	10.00
Breast tumor, benign removal	40.00
Breast, radical removal, including axillary dissection	150.00
Breast, simple removal	75.00

Miscellaneous

Ligation, saphenous vein, low, including retrograde injection, if done, unilateral	$ 25.00
Bilateral	50.00
Ligation, saphenous vein, high, and combined including retrograde injection,	
Unilateral	50.00
Bilateral	75.00
Toe nail, ingrown, removal radical	20.00
Stone, submaxillary or parotid duct	25.00
Removal or submaxillary salivary gland	50.00
Injection, varicose veins, complete procedure	25.00
Injection without ligation, each	3.00
Maximum	30.00
Saphenous vein, stripping operation,	
Unilateral	75.00
Bilateral	100.00

ENDOSCOPY

(When preliminary and related to surgical service only)

Bronchoscopy, diagnostic or therapeutic	$ 40.00
Operative	50.00
Subsequent, except post operative	25.00
Cystoscopy	
Observation (preceding surgery)	15.00
Ureteral catheterization and pyelograms	35.00
Operative	35.00
Gastroscopy	40.00
Laryngoscopy	
Diagnostic (by laryngoscope)	20.00
Operative	75.00
Sigmoidoscopy and biopsy	10.00
Esophagoscopy, diagnostic and therapeutic	40.00

SPECIAL SURGERY

Thoracic Surgery

Pneumolysis, intrapleural	
Closed	$100.00
Open	150.00
Pleura, paracentesis	7.50
Empyema, closed drainage	35.00
Empyema, rib section	100.00
Phrenic nerve, crushing	50.00
Thoracoplasty	200.00
Lobectomy	200.00
Aneurysmorrhaphy	200.00
Induction of artificial pneumothorax or pneumoperitoneum	20.00
Refills	5.00

Abdominal Surgery

Abdomen, paracentesis	$ 10.00
Herniotomy, single, inguinal, femoral or umbilical	100.00
Herniotomy, bilateral, inguinal or femoral	125.00
Herniotomy, hiatus or diaphragmatic	150.00
Herniotomy, ventral or incisional	100.00
Esophageal diverticulum (pharyngo-esophageal)	125.00
Gastrotomy or gastrostomy	100.00
Gastrectomy	
Partial	175.00
Complete	200.00
Gastro-enterostomy	125.00
Vagotomy, additional allowance when done with gastro-intestinal surgery	25.00
Peptic ulcer, perforated, closure	100.00
Pyloric stenosis (Ramstedt's in infant)	100.00
Intestines, anastomosis	125.00
Intestines (small), resection	150.00
Laparotomy (exploratory)	75.00
Colon, resection	175.00
Colostomy	100.00
Appendectomy	100.00
Diverticulum, intestinal (Meckel's)	100.00
Common duct, exploration, with or without cholecystectomy	175.00
Appendiceal abscess, drainage	100.00
Subdiaphragmatic abscess	100.00
Cholecystectomy	125.00
Common duct, resection or reconstruction	150.00
Cholecystostomy	100.00
Cholecystoduodenostomy	125.00
Cholecystogastrostomy	125.00
Pancreas, drainage	100.00
Splenectomy	175.00

PROCTOLOGY

Hemorrhoids, injection, each	$ 3.00
Maximum	30.00
Hemorrhoids, external	25.00
Hemorrhoid, thrombosis, incision	5.00
Hemorrhoid, thrombosis, excision	10.00
Complete hemorrhoidectomy in hospital	90.00
Complete hemorrhoidectomy in office	35.00
Fistulectomy	90.00
Fissurectomy, in office	10.00
Fissurectomy in hospital	25.00
Fissurectomy, complete cryptectomy with papillectomy in hospital	90.00

Polypectomy	25.00
Abcess, ischio-rectal or peri-rectal drainage	25.00
Carcinoma of rectum, resection	200.00
Prolapsed rectum, repair mucosa	100.00
Prolapsed rectum, repair, herniation, all coats	150.00
Excision of anal ulcer with cryptectomy	90.00

UROLOGY

Circumcision, infant not requiring anesthesia	$ 5.00
Circumcision, excepting the above	25.00
Urethrotomy	75.00
Prostatic abcess	50.00
Prostatectomy, perineal	150.00
Prostatectomy, suprapubic—one stage including vasectomy if required	150.00
Prostatectomy, suprapubic—two stage including vasectomy	175.00
Prostatectomy, transurethral	150.00
Punch operation with suprapubic drainage	120.00
Perineoplasty with urethral repair	100.00
Hydrocele, radical operation	50.00
Litholopaxy	75.00
Epididymectomy	75.00
Vasectomy (when not preliminary to prostatectomy)	25.00
Vesiculectomy	100.00
Varicocelectomy	50.00
Orchidectomy, simple	75.00
With gland dissection	125.00
Cystotomy or Cystostomy	75.00
Cystostomy with fulguration	125.00
Cystectomy with ureteral transplantation	200.00
Ureter transplantation, single	150.00
Bilateral	200.00
Bladder tumor, diverticula, etc. (resection), open operation	125.00
Uretero-lithotomy	125.00
Nephrotomy	125.00
Nephrostomy	125.00
Nephrectomy	125.00
Nephropexy	125.00
Plastic on pelvis and ureter	150.00
Heminephrectomy	125.00
Excision and suture of urinary fistula	
suprapubic	50.00
vaginal	100.00
Penis amputation	75.00
Same with groin dissection	150.00
Plastic hypospadias or epispadias	200.00
Meatotomy	10.00
Caruncle excision	15.00
Caruncle fulguration	15.00

NEURO-SURGERY

Skull

Simple fracture (non-operable) with brain injury	$ 35.00
Depressed	75.00
Compound fracture	150.00
Brain tumor	200.00

Brain Injuries; Operable Type

Extradural hematoma	$150.00
Subdural hematoma	150.00
Exploratory trephination, one side	50.00
Two sides	75.00
Intracortical clot	150.00
Arterio-venous fistula, intracranial	200.00
Intracranial aneurysm	200.00

Spinal Cord

Section of anterior or posterior roots	$150.00
Decompressive laminectomy	150.00
Removal of or exploration for an extruded nucleus, polyposis or ruptured intervertebral disc	150.00
Myelography	25.00
Cerebral arteriography	25.00

Peripheral Nerve

Suture, decompression, or transplantation of single nerve	$ 25.00
Each additional	10.00
Maximum	100.00
Pneumoencephalogram	25.00
Ventriculogram	40.00
Spinal cord tumors	150.00
Operation for pain associated with malignancy or similar untreatable disease requiring intraspinal nerve sections or cordotomy	150.00

Miscellaneous

Section of sensory root for fifth nerve neuralgia	$175.00
Section of vestibular nerve for Meniere's disease or aural vertigo	175.00
Operation for scalenus anticus syndrome	50.00
Craniotomy for brain abcess	150.00
Craniotomy for conditions not listed herewith	150.00
Bilaterial orbital decompression	200.00
Choroidectomy for hydrocephalus	150.00
Excision of meningocele	75.00
Lumbar puncture (with fracture or operative work only) (diagnostic excluded)	5.00

Sympathetic System

Unilateral lumbar sympathectomy	$100.00
Bilateral lumbar sympathectomy	150.00
Resection of pre-sacral plexus	150.00
Bilateral thoracolumbar sympathectomy	200.00

OBSTETRICS

Pregnancy, delivery	$ 50.00
(Does not cover prenatal and postnatal home and office care.)	
Miscarriage (curettage)	35.00
Caesarean section, vaginal	100.00
Caesarean section, abdominal	100.00
Pregnancy, ectopic	100.00

Gynecology

Bartholin's gland, incision	$ 5.00
Bartholin's gland, excision	25.00
Labial tumors and cysts, removal	20.00
Atresia of vagina, plastic	150.00
Fistula, recto-vaginal	100.00
Fistula, vesico-vaginal	100.00
Cul-de-sac, drainage	35.00
Cauterization, each	3.00
Maximum	12.00
Dilatation and curettage with or without cauterization	25.00
Uterine polyp removal with dilatation and curettage	25.00
Cervical polyp removal	5.00
Tracheorrhaphy	35.00
Cervix amputation	50.00
Cervix conization	15.00
Oophorectomy or resection of ovaries	100.00
Hysterectomy, supracervical, with or without removal of adnexa	150.00
Hysterectomy, total, with or without removal of adnexa	175.00
Myomectomy	100.00
Uterine flexions, etc., correction (plus surgery of tubes and ovaries)	100.00
Same with vaginal plastic work	125.00
Salpingectomy	100.00
Salpingo-oophorectomy	100.00
Cystocele	50.00
Rectocele	50.00
Combined cystocele and rectocele	75.00
Prolapse operations (interposition, Manchester)	120.00
Vulvectomy	75.00
With groin dissection	150.00

Ophthalmology

Foreign body, removal,	
Aqueous humor	$ 75.00
Vitreous humor	125.00
Cornea, Paracentesis	20.00
Conjunctival suture	15.00
Conjunctival flap for corneal ulcer, etc.	35.00
Chalazion (excision), simple	15.00
Incision and Curettage	10.00
Lachrymal sac, removal	75.00
Entropion or ectropion, Ziegler's puncture	30.00
Entropion or ectropion, plastic operation	50.00
Entropion or ectropion, plastic operation grafts or flaps	100.00
Symblepharon, release	35.00
Pterygium	50.00
Corneal ulcer, cauterization	5.00
Corneal ulcer, delimiting keratotomy	30.00
Tarsorrhaphy, orbicularis paralysis	30.00
Ptosis (single)	100.00
Strabismus, one or more muscles	100.00
Cataract, needling	50.00
Cataract, removal	150.00
Iridectomy	75.00
Removal foreign body of cornea	3.00
Glaucoma, filtration operation	150.00
Enucleation or evisceration	100.00
Enucleation with implant	140.00
Tumor, exenteration of orbit	150.00
Dacryocystorhinostomy	125.00
Detached retina	200.00
Probing naso-lacrymal duct (each visitation)	5.00
Maximum	50.00

Otology

Aural polyp	$ 25.00
Paracentesis tympani	10.00
Mastoidectomy, acute, single	150.00
Mastoidectomy, acute, bilateral	200.00
Mastoidectomy, radical, single	175.00
Fenestration for otosclerosis	200.00

Nose and Throat

Nasal polyps, removal, unilateral	$ 25.00
Bilateral	50.00
Antrum, Caldwell-Luc	150.00
Ethmoidectomy	75.00
Frontal sinus, radical	150.00
Turbinectomy	10.00
Submucous resection	75.00
Palatorrhaphy	100.00
Tonsillectomy and adenoidectomy	40.00
Laryngectomy	200.00
Tracheotomy	75.00
Malignant disease, accessory sinuses	
Radical operation, one sinus	150.00
Multiple	200.00
Malignant disease, tonsil and pharynx radical operation	175.00
Antrum puncture and irrigation	5.00
Antrum window	50.00

Orthopedic

Spinal fusion	$200.00
Cartilage of condyle of femur, removal of	100.00
Bone plate, removal of	30.00
Talipes	60.00
Semilunar cartilage, removal from joint	125.00
Tenotomy, simple, open	50.00
Closed	10.00
Claw foot, except bone surgery—see foot stabilization	75.00
Coccyx, excision of	30.00
Arthrotomy, any major joint	100.00
Hallux valgus, single radical operation	75.00
Exostosectomy	30.00
Osteomyelitis, sequestrum removal, deep	100.00
Hallux valgus, bilateral radical operation	125.00
Foot Stabilization	175.00
Hammer toe, operation for	50.00
Arthrodesis of knee, hip, shoulder or elbow	200.00
Torticollis, operation for	90.00
Arthroplasty, any major joint	200.00
Hip joint, resection	200.00
Any other major joint, resection	175.00

Any joint, resection of, fingers or toes	30.00
Bone Graft, any long bone	175.00

AMPUTATIONS

Shoulder, disarticulation	$150.00
Upper arm	100.00
Forearm	100.00
Hand	100.00
Finger, single	25.00
Each additional	10.00
Hip	175.00
Thigh	125.00
Knee	125.00
Leg	100.00
Toe	25.00
Each additional	10.00
Foot	100.00
Elbow	100.00
Scapulothoracic amputation	200.00

DISLOCATIONS

	Closed	*Open*
Ankle—no fracture	$ 75.00	$150.00
Carpal bone, one	35.00	70.00
Each additional	10.00	20.00
Clavicle	40.00	80.00
Elbow	50.00	100.00
Finger, one	10.00	20.00
Each additional	5.00	10.00
Hip, Congenital	100.00	200.00
Traumatic	50.00	100.00
Knee	50.00	100.00
Mandible	10.00	100.00
Metacarpal bone, one	25.00	50.00
Each additional	5.00	10.00
Metatarsal bone, one	25.00	50.00
Each additional	5.00	10.00
Patella	40.00	125.00
Rib	10.00	20.00
Shoulder	40.00	150.00
Tarsal bone, one	35.00	70.00
Each additional	10.00	20.00
Thumb	10.00	20.00
Toe, one	10.00	20.00
Each additional	5.00	10.00
Vertebra, one or more	100.00	200.00
Wrist, no fracture	50.00	100.00

SIMPLE FRACTURES

	Closed	*Open*
Lower jaw	$ 30.00	$ 60.00
Carpal bone, one (except carpal scaphoid)	30.00	60.00
Each additional	10.00	20.00
Clavicle	40.00	80.00
Coccyx	10.00	20.00
Femur, uncomplicated	100.00	
Complicated	150.00	200.00
Fibula	50.00	100.00
Tibia, without appreciable displacement	50.00	
With displacement	125.00	175.00
Pott's or Cotton's Fracture	90.00	150.00
Finger, one	15.00	30.00
Each additional	5.00	10.00
Humerus	75.00	150.00
Metacarpal bone, one	25.00	50.00
Each additional	5.00	10.00
Metatarsal bone, one	25.00	50.00
Each additional	5.00	10.00
Patella	40.00	125.00
Nasal bone or bones, reduction	30.00	60.00
Pelvis, no displacement	50.00	
Pelvis, displaced	90.00	175.00
Radius or ulna, or both (no displacement)	30.00	150.00
Radius or ulna, or both, displaced	75.00	150.00
Rib, one	10.00	
Each additional	5.00	
Sacrum	40.00	80.00
Scapula	30.00	60.00
Skull	40.00	80.00
Sternum	25.00	
Tarsal bone, one (exclude os calcis and astragalus)	35.00	70.00
Each additional	7.50	15.00
Toe, one	10.00	20.00
Each additional	5.00	10.00
Os calcis or astragalus, or both	60.00	120.00
Vertebra, one or more	120.00	175.00

COMPOUND FRACTURES

Compound fractures, not requiring open operation, will be one and one-half times the amount listed for corresponding simple fractures or dislocations, but not to exceed $200.00.

DEATHS

Dr. Murray B. Davis, Nashville, died of a heart attack Tuesday, July 22, 1952. Aged 58.

* * *

Dr. William Thomas Pride, Memphis, professor emeritus of obstetrics and gynecology at the University of Tennessee Medical School, died July 31, 1952, in Huntsville, Ala. Aged 71.

* * *

Dr. Robert C. Garrett, Eagleville, and Rutherford County's oldest practicing Physician (52 years), died July 3, 1952. Aged 79.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Four-County Society

This new society continues to have excellent programs and good attendance. Physicians in Henry, Weakley, Benton and Carroll Counties meet bimonthly for social and scientific purposes. The society was organized March 18 in Paris, when Dr. Martin Beyer, Dresden, was elected president; Dr. J. Mansfield Bailey, Camden, vice-president; and Dr. John Newmann, Paris, secretary-treasurer. The scientific program was a paper on ACTH and Cortisone by Dr. Beverly Towery of Nashville, with discussion led by Dr. R. H. Kampmeier, Nashville.

At the May 20 meeting in Martin, Dr. D. W. Smith, Nashville, our State Association President, discussed "Diverticulosis."

The July meeting was held in McKenzie with Dr. Joe Strayhorn of Nashville reading a paper on "Feeding Problems in Infants."

The next meeting is scheduled for September 16 at Camden. Following a fish-fry at Frank's Cafe, Dr. John Glover, Nashville, will discuss "Common Fractures."

Average attendance at meetings has exceeded two-thirds of all the doctors in the four counties.

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Consolidated Medical Assembly

Members of the Assembly and their wives were treated to a barbecue fest at the Jackson Country Club on July 17th. The Jackson Clinic was the host. It was a delightful "shirt-sleeve" affair with no speeches. Guests included Dr. Daugh W. Smith, President of the State Association, and V. O. Foster, Executive Secretary, both of Nashville.

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Chattanooga-Hamilton County Medical Society

The society held its annual barbecue and picnic at the Chattanooga Rod and Gun Club on July 9th. Wives and families of the members were special guests, along with the interns and residents at Erlanger and Memorial Hospitals. Softball, skeet and other competitive sports preceded the barbecue. Dr. Charles L. Suggs, Jr., and Dr. J. M. Higgason were co-chairmen of the Arrangements Committee.

The society's scientific program on June 26th consisted of a movie on "Glaucoma," a paper on the "Clinical Evaluation of the Disc Method of Determining Bacterial Sensitivity" by Dr. Pope Holiday, and another paper on the "Treatment of Burns and Their Sequelae" by Dr. Howard Barnwell. Dr. William R. Green discussed Dr. Holiday's paper, and Dr. Gus Vlasis discussed Dr. Barnwell's paper.

*

Smith County Medical Society

The society, with one dissenting vote, went on record last month as opposing the leasing of new Smith County Hospital to one of its members. (A hospital committee of the County Court had previously leased the Hospital to a Society member.) The society's resolution stated that the society "favors the operation of the Smith County Hospital as open to all regular, licensed physicians for the practice of medicine and surgery, and that any patient or prospective patient have free choice of physician or surgeon."

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Nashville Academy of Medicine

The Nashville Academy of Medicine and Davidson County Medical Society is actively pursuing its Public Service program by instituting action in two important activities. The Academy membership voted to endorse the proposed contract wherein Vanderbilt University would operate Nashville General Hospital as agents for the Board of Commissioners of General Hospital to represent the City of Nashville. Members of the Academy have been active in presenting this matter and a special committee consisting of Drs. C. C. Trabue, IV, J. Owsley Manier, John M. Lee and Andrew Mayer recently recommended that the proposed contract be endorsed by the Academy. The contract has been submitted to the City Council for ratification. This is now expected to be adopted.

The second Public Service Activity of importance is the participation in vocational forums in Nashville Senior High Schools. West End High School and East Nashville High School have held such forums where a physician member of the Academy has discussed with large groups of high school students the requirements necessary for entering medical service and the opportunity that exists in the related fields of medicine such as nurses, laboratory technicians and others. This activity has been of tremendous interest to school students and each session was attended by large groups.

The Academy in cooperation with the Tennessee State Medical Association has recently completed the series of meetings comprising the course in public relations for doctors' secretaries, receptionists and assistants. 129 doctors' secretaries and assistants recently received their certificate of graduation for this course.

Knoxville Academy of Medicine

Dr. Jack L. Paradise of Lynch, Kentucky, spoke on "Mother Deprivation of Hospitalized Children" at the meeting on July 15.

Memphis and Shelby County Medical Society

A "Symposium on Gall Bladder Disease" was held at the meeting of June 3. The subjects discussed were:

"Pathological Considerations," by Dr. M. L. Trumbull.

"X-Ray Diagnosis," by Dr. Edward Mabry.

"Medical Aspects," by Dr. M. K. Callison.

"Surgical Treatment," by Dr. Alphonse Meyer, Jr.

MEDICAL NEWS IN TENNESSEE

Hill-Burton Hospital Construction Program

As of July 1, 1952, twenty-five projects had been completed and were in operation in Tennessee. The total cost was $19,745,050.00, of which the federal contribution was $7,036,284.00. 1,370 beds were supplied.

There were fifteen projects under construction costing $25,081,978.00, of which $8,552,911.11 were federal funds to supply an additional 861 beds.

Approved, but not under construction, were six projects at a total cost of $2,224,560.00, of which $1,156,771.00 will be federal funds. These projects will supply 157 additional beds.

Tennessee Chapter, American College of Surgeons

The Chapter's Council, composed of the officers of the Chapter and the governors of the ACS in Tennessee, met in Nashville on Sunday, June 8th. Dr. R. L. Sanders, Memphis, President of the Chapter presided. Others present were: Drs. E. T. Newell, Sr., Chattanooga; Dewey Peters, Knoxville; John C. Burch, Nashville; David Waterman, Knoxville; L. W. Edwards, Nashville, and Mr. V. O. Foster, Executive Secretary of the TSMA.

President Sanders reviewed the organization of the Tennessee Chapter which took place in Knoxville in conjunction with the Annual Meeting of the TSMA in April. He stated that 305 Fellows of the A.C.S. were polled on the desirability of organizing a Tennessee Chapter before the organizational meeting and that 87% replied in favor of organizing. Officers elected at the Knoxville meeting were: Dr. Sanders, President; Dr. Newell, Vice-President, Dr. Peters, Secretary. Dues were also set at $5.00 per year.

The Council approved an application for a charter from the American College in the form suggested by the College. It also adopted By-Laws as recommended for state Chapters by the American College.

Action on the Charter for Tennessee is expected to be taken by the American College Council during the 38th Clinical Congress of the A.C.S. in New York on September 22-26, when an attendance of 10,000 surgeons is expected.

The Council voted to hold the first regular meeting of the Tennessee Chapter in Nashville during the month of October, preferably a one-day meeting immediately preceding the Nashville Medical Assembly schedule for October 29-31. The program is to consist of a morning clinical demonstration by Nashville surgeons, a panel discussion, luncheon, papers from members, and finally, a dinner with an outstanding guest speaker.

The Secretary, Dr. Peters was instructed to proceed with sending enrollment invitations to all 305 FACS men in Tennessee, all of whom are eligible to join the Tennessee Chapter.

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Upper Cumberland Medical Society

The society held its fifty-eighth meeting at Red Boiling Springs on June 24-25, under the presidency of Dr. C. A. Collins of Monterey. The following program was presented:

"Asthma and Cardiac Dyspnea" by R. E. Key, M.D., Carthage;

"Obstetric Analgesia" by R. C. Gaw, M.D., Gainesboro;

"The Surgical Treatment of Duodenal Ulcer" by J. L. Herrington, M.D., Nashville;

"Surgical Correction of Prognathism of the Mandible or Lower Jaw," George Seeman, D.D.S., Nashville;

"Medicine's Stake in the 1952 Elections" by V. O. Foster, Nashville;

"Vaginal Hysterectomies" by Carl S. McMurray, M.D., Nashville;

"Fractures of the Hip—Recent Advances" by Benjamin Fowler, M.D. and Don L. Eyler, M.D.. Nashville;

"Medullary Nailing of the Shafts of Long Bones" by John J. Killefer, M.D., Chattanooga;

"Commonly Misdiagnosed Skin Disorders" by Frank G. Witherspoon, M.D., Nashville;

"Abnormal Vaginal Bleeding" by Arch Bullard, M.D., Chattanooga;

"Infectious Mononucleosis" by W. R. Cate, M.D., Nashville;

"Healing Wounds" by Beverly Douglas, M.D., Nashville;

"Carcinoma of the Prostate" by O. W. Carter, M.D., Nashville;

"Antibiotics" by C. A. Collins, M.D., Monterey;

"Low Back Disability" by Joe Burd, M.D., Nashville;

"Diaphragmatic Hernia" by Robert M. Metcalf, M.D., Crossville;

"Pelvic Pain" by Henry H. Jenkins, M.D., Nashville.

★

The Le Bonheur Children's Hospital, Memphis

The Hospital was formally opened and dedicated on June 15. It was open for inspection to the members of the Memphis and Shelby County Medical Society and Ninth District Dental Society on the preceding day.

The new 100 bed hospital and its equipment cost exactly $2,280,992.57. Of this amount nearly one-half was given by the Federal government under the Hill-Burton Act; about one-fourth was provided by the State of Tennessee and the remainder was raised by Le Bonheur Memphis' women's philanthropic organization, through special gifts and public subscriptions. The hospital is designed for patients from infancy to 14 years of age; it is the only general practice hospital exclusively for children in the Mid-South.

The seminar, held at the hospital June 25-26, was sponsored jointly by the staff of the hospital and the faculty of the Division of Pediatrics of the University of Tennessee College of Medicine.

The program on June 25 was as follows:

Dr. Harold W. K. Dargeon, "General Considerations of Tumors in Childhood";

Dr. Amos Christie, "The Disease Spectrum of Human Histoplasmosis — Differential Diagnosis";

Dr. Lenox D. Baker, "Surgery as Related to Cerebral Palsy";

Dr. Julius H. Hess, "Poliomyelitis: Summarizing the 1950 and 1951 Experiences in Illinois and Cook County as related to Subcutaneous Injection of Immunizing Agents and Other Medical Substances";

Dr. John Caffey, "The Origin and Nature of Pulmonary Cysts During Early Infancy";

Dr. Dargeon, "Neuroblastoma."

Four members of the staff of the University of Tennessee College of Medicine presented a symposium on burns. They were Dr. W. Milton Adams, Dr. G. W. Changus, Dr. James D. Hardy, and Dr. Leigh K. Haynes.

On June 26, the program consisted of the following papers:

Dr. Lenox D. Baker, "Treatment of Fractures in Children";

Dr. John Caffey, "The Skeletal Lesions of Vitamin A Poisoning and Infantile Cortical Hyporostosis and Nutritional Disturbances";

Dr. Amos Christie, "Causes of Rectal Bleeding in the Pediatric Age Group."

The session closed with a symposium on common skin diseases, with four members of the U. T. College of Medicine Staff participating. They were Dr. Emmett R. Hall, Dr. C. R. Marshall, Dr. David Goltman and Dr. John W. Baird.

The Medical Staff of the hospital, which is an open one, is fully organized with the following officers:

F. Thomas Mitchell, M.D., Chief of Staff;
James G. Hughes, M.D., Vice-President;
C. Barton Etter, M.D., Secretary;
J. Spencer Speed, M.D., Chief of Surgery;
J. A. Danciger, M.C., Chief of Medicine.

Freeman E. May is Administrator of the hospital.

University of Tennessee Medical Units

Jesse D. Perkinson, Jr., Ph.D., of the Medical Division of the Oak Ridge Institute of Nuclear Studies, has been appointed as associate professor in the Department of Biochemistry.

Amendment to Regulations Concerning Communicable Diseases in Tennessee

Regulation 29 of the Regulations Governing Communicable Diseases in Tennessee be, and the same is hereby amended by striking out said Regulation in its entirety and by inserting in lieu thereof the following:

"The Treatment of the Eyes of Newly-Born Children Regulation 29.

"In accordance with the provisions of the 1932 Code of Tennessee, Sections 11174, 11175, and 11176, the Tennessee Department of Public Health hereby designates and approves either of the following solutions as a standard prophylactic against ophthalmia neonatorum:

> "Silver Nitrate 1% (one per cent) aqueous solution
>
> "Argyrol—15% (fifteen per cent) aqueous solution

"Hospitals licensed by the Tennessee Department of Public Health having twenty-five (25) or more beds may be permitted to use as a prophylactic agent a drug or an antibiotic other than silver nitrate and argyrol; provided that said hospital place on file with the Department a written request giving a detailed description of the drug or antibiotic proposed to be used together with a description of the proposed technique of administration and receives from the Commissioner of Public Health a written approval of the drug or antibiotic and the technique of administration to be used, said hospital shall be permitted to deviate from the standard technique to the extent approved by the Commissioner."

Approved both as to form and legality May 12, 1952.

(Signed) Roy H. Beeler, Attorney General,
State of Tennessee

Adopted April 8, 1952.

(Signed) R. H. Hutcheson, Commissioner,
Tennessee Department of Public Health

Filed May 14, 1952.

(Signed) James H. Cummings Secretary of
State, State of Tennessee

PERSONAL NEWS

Two new doctors have been added to the staff of the Jackson Clinic. They are **Dr. Ray A. Douglas, Jr.**, native of Huntingdon, and **Dr. Edwin W. Edwards**, native of Gulfport, Miss.

Dr. A. G. Randall, Nashville, has been appointed assistant county health director for Davidson County.

Dr. W. Powell Hutcherson, Chattanooga, is now a diplomate of the American Board of Obstetrics and Gynecology. He is also a member of the American Academy of Obstetrics and Gynecology.

Dr. O. M. Swanay, Rogersville, has retired from practice after 45 years of service.

Dr. Stewart Smith, after completing a year of graduate study in pediatrics, is now associated with **Dr. John W. Hocker** in the Hocker Clinic for Children in Chattanooga.

Dr. Claude V. Murr, Jr., is now assiciated with **Dr. John B. Haskins** with offices in the Medical Arts Building, Chattanooga.

Dr. Swan Burrus, Jr., after a three-year residency in Philadelphia Lying-In Hospital, in obstetrics and gynecology, has returned to Jackson where he is in partnership with his father, **Dr. Swan Burrus, Sr.**

Dr. Clarence M. Easley, formerly of Morristown, is now associated with **Dr. S. D. Sullenberger** at the Sullenberger Clinic in Dandridge.

Dr. Vernon A. Burkhart, formerly of Chattanooga, moved to Winchester last month and has begun practice with officers in the Anasarcin Building on College Street.

Dr. W. I. Thornton, Jr., and **Dr. Thomas Johnson,** both natives of Dyersburg, have returned to their home town and have recently established their offices on the third floor of the First Citizens National Bank.

Dr. J. Gilbert Eblen was recently elected president of the Knoxville Mental Health Association.

Dr. John Craven, Washington County health officer, has resigned and will take special work in X-ray in Cleveland and will enter private practice later.

Dr. Joseph W. Johnson, Jr., Chattanooga, addressed the Chattanooga Health Council recently and urged that more study and financial support be given the mental health problem.

Dr. Charles R. Thomas, Chattanooga, has been named to the Council of the Southern Medical Association, succeeding **Dr. R. L. Sanders** of Memphis.

Dr. J. K. Hinton, Jr., Halls, has begun a refresher course in surgery at Tulane, and will begin a surgical residency at Luthern Hospital next January.

Dr. George G. Young, Chattanooga, has returned to his offices in the Interstate Building after a year's study at the Lahey Clinic.

Dr. Pope B. Holliday, Jr., Chattanooga, has been elected a fellow of the American Academy of Pediatrics.

Dr. M. Shannon Allen, Jr., has opened an office in Kingsport for the practice of general surgery and gynecology.

Clarksville has two new physicians. They are **Dr. Bryan T. Inglehart** and **Dr. Charles A. Trahern.**

Three new doctors have joined the surgical staff of Newell Hospital, Chattanooga. They are **Dr. Jerome P. Sims, Dr. Boyd L. Hames,** and **Dr. Warren Terrell.**

Dr. L. C. Smith, Henderson, after 52 years of practice, has retired and a young native son, **Dr. Oscar McCallum** has taken over his practice.

Dr. T. A. Patrick, Jr., after completing residency at Kennedy Hospital, has returned to Fayetteville to practice with his father.

Dr. Edgar Bratton and **Dr. C. S. Morrow,** newly located physicians in Hartsville, announce the opening of their 15-room Clinic on Church Street.

BOOK REVIEW

The Serpent-wreathed Staff, Alice Tisdale Hobart, New York, The Bobbs-Merrill Co., Inc., 1951. Price $3.50.

Are Whitaker and Baxter to do the thinking for Tennessee doctors! A book review "prepared for use by State and County Medical Journals" sent out by this firm is reminiscent of some of the things we decry in certain sections of Washington bureaucracy. At the moment your reviewer is not in the position to discuss the pros and cons of Whitaker and Baxter and the education of the lay public. But he does question the propriety of providing such canned material as this book review with the implication that it be used in lieu of independent thinking by some member the most learned of professions.

Your reviewer has read this novel. The author in contrasting the personalities of two brothers, physicians—one a successful, conservative surgeon, the other an idealist—tries to describe medicine in this rapidly changing world. She must then perforce compare the one doctor, fixed in his ideas, with the one who wishes to change the practice of medicine in light of changing socio-economic trends, and of necessity she weaves into the story group practice, health insurance, racial problems and others.

The writer of the canned review sees this novel as a piece of dangerous propaganda. Your reviewer disagrees with this opinion—feeling that **as propaganda** for socialized medicine it is poorly done. The proof is found, it seems, in the reactions of several highly intelligent laymen who having read the novel asked me, "What is she (Alice Hobart) trying to do?" They have been puzzled as to her objective. The book left your reviewer "cold," insofar as reaction one way or another is concerned. He agrees with the Whitaker and Baxter review that some parts of the novel are ineptly done. Furthermore, that inaccuracies and misstatements are not infrequent. However, this is not supposed to be a documented treatise. From our days in high school English we recognize poetical license. Your reviewer is sure that no historical novel even of famed persons, leave along a novel about fictitious persons, is without such inaccuracies frank or implied.

This book review is incomplete as a review. It questions, rather, the propriety of

Whitaker and Baxter book reviews. Possibly some of the profession will be stimulated to read the book now, as a matter of curiosity—a book that assuredly will not find a place on the shelves of Time.

R. H. K.

* * *

The Story of the Adaptation Syndrome. Hans Selye, M.D., Montreal, Acta, Inc., 1952. 225 Pages. Price $4.50.

This book collects between its covers seven lectures on the "stress concept" which the author has developed and described in numerous publications in the past fifteen and more years. This is in essence a concept which approaches disease in a basic fashion—namely reaction or adaptation of the body to stress whether of physical or mental nature. It is related to tissue reactions in broad terms and not specific etiologic agents. The concept which antedated ACTH and Cortisone has been strengthened, or one might say, proven by the action of these hormones and physiologic studies made possible through their use.

This small book will make fascinating reading for him who is interested in these fundamental concepts of disease. As lectures they are easy reading not being too heavily larded with experimental data.

R. H. K.

LOCATION WANTED

Forty year old graduate of Syracuse College of Medicine. Surgical resident, New York Hospital 1939-41. Thoracic Surgical Resident, Triboro Hospital, Jamaica, L. I., N. Y. Lt. (jg) MC-USN 1941. Resigned 1949 (Commander). Chief of Surgery, V.A. Hospital, Kerrville, Texas, 1949-51. F.A.C.S., Assoc. Fellow A.C.C.P. Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

LW-6

* * *

Thirty-one year old physician, married, with 41 months' military service. M.D. Degree, Washington University 1950. Now in a rotating residency in Charity Hospital, Monroe, Louisiana.

LW-8

* * *

Thirty-two year old physician, married. M.D. Degree from Tulane. Rotating Residency, Baptist Hospital, Birmingham. Two years army service, three years general practice.

LW-9

* * *

Thirty-one year old physician, married. M.D. Degree from Cornell University, 1945. Two years military service. Assistant Residency in general surgery, Bellevue Hospital. Presently completing two year residency in thoracic surgery at Bellevue Hospital.

LW-10

Physician, aged 32, married, Baptist. M.D. from Washington University, 1944. Five year surgical residency at Charleston, West Virginia, General Hospital, 1947-52. Two years military service.

LW-11

* * *

Twenty-seven year old physician, married, no children, Presbyterian. M.D. Temple University, 1951; general rotating internship, Temple University Hospital, 1952. Draft status: three years military service, honorable discharge, priority group II.

LW-12

* * *

Twenty-eight year old physician, married. M.D. from Emory University, 1951. Now interning at Wayne County Hospital, Detroit. Interested in assistantship or partnership in general practice.

LW-13

* * *

Position desired in an institution, public health, or industrial organization. Thirty-three year old phsician, married. M.D. Degree from St. Louis University, 1947. Four years' general hospital training; one year general practice.

LW-14

* * *

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

* * *

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

* * *

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosprous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

* * *

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

* * *

The Midland Community, located between Murfreesboro and Shelbyville, has built a medical center and desires a local physician. Building equipped with two offices, a waiting room, and supply room, oil heat, and equipment—all available without charge.

PW-9

* * *

A physician in an upper East Tennessee City will be away from his practice for one year, and would like to have a young physician take over for him during this absence. After July 1, a five-room fully equipped office building which is visited daily by 40 to 75 patients will be available. The office is located in an industrial city of 14,000 people, and across the street from a 32-bed hospital. Hospital privileges assured. An excellent opportunity for a general practitioner. Various financial arrangements possible, and good opportunity for new doctor to remain permanently.

PW-10

* * *

Cross Plains, Tennsseee, thirty miles north of Nashville, twelve miles from Springfield. Three room office suite available from local drug store without charge.

PW-11

* * *

Lions Club of Huntland, Tennessee, is completing a clinic building and desires physician to occupy at reasonable terms and serve community of 1,000 families. Huntland is located just off Highway 64 in Franklin County. Agricultural community.

PW-12

* * *

Federal Civil Defense Administration Regional Offices are authorized to employ full-time medical directors to handle medical civil defense problems, at a salary of $10,900 per year.

PW-13

* * *

Forty-six year old Memphis internist, temporarily disabled, desires a young, well-trained associate, not necessarily a Board man. Salary or other financial arrangement open. Office is shared with another internist who would be available for help.

PW-14

* * *

V. A. Hospital has position available for physicians interested in Psychiatry as well as for an Internist, Neurologist, Radiologist and Pathologist. There are provisions for annual and sick leaves, and for attendance at special courses.

PW-15

ANNOUNCEMENTS

International College of Surgeons Meeting

The Seventeenth Annual Assembly of the United States and Canadian Chapters will be held in Chicago, September 2, 3, 4, 5, 1952, with headquarters at the Conrad Hilton Hotel. An item of interest will be the Herbert Acuff Memorial Address at 9:00 a.m., September 4th.

* * *

An Open Letter

PARKE, DAVIS & COMPANY

July 7, 1952

Dear Doctor:

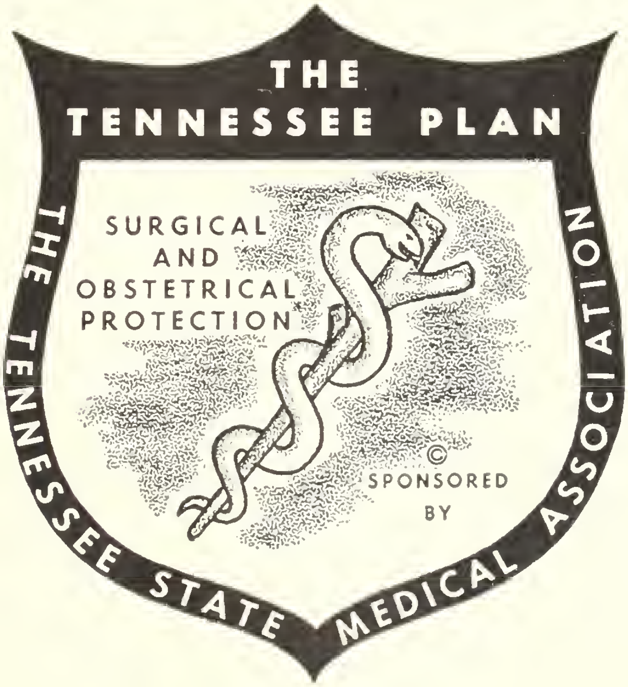
Physicians from various sections of the country have reported that blood dyscrasias (thrombocytopenia, leukopenia, granulocytopenia, agranulocytosis, and aplastic anemia) have ccurred in patients who have received Chloromyectin^{R} (chloramphenicol, Parke-Davis). Among these there has been no uniformity of circumstances, including age, sex, dosage, type of concomitant therapy, or diagnosis. Frequently, though again not uniformly, the individual patient's history includes reference to earlier therapy with Chloromycetin and other drugs and in several instances to intermittent therapy, planned or unplanned, over prolonged periods.

The exact number of cases of aplastic anemia associated with the use of Chloromcetin is not known, but it is recognized that many have terminated fatally. Further, clinical evidence from published and unpublished reports, indicates that intermittent therapy with the antibiotic, and particularly indiscriminate therapy for minor affections, frequently obtain. These facts indicate that there is a calculated risk involved in the use of this potent antibiotic so that alert clinical observations and adequate blood studies should be made to detect any depression of bone marrow function as early as possible and before an irreversible state occurs.

Parke, Davis & Company assures the medical profession that as information accumulates from continuing studies on the relation of blood disorders to Chloromycetin it will be disseminated promptly through appropriate channels.

Doctor, please read our pronouncement in the Journal of the American Medical Association issue of July 12, 1952.

Sincerely Yours,
(Signed) E. A. SHARP, M.D., Director,
Department of Clinical Investigation
eas:ig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Journal of the Tennessee State Medical Association

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Symposium on Peripheral Vascular Disease

Intravascular clotting remains as a hazard and complication especially after surgical procedures. It is not decreasing in frequency, may even be increasing in incidence as more older and debilitated patients survive the bold attacks of modern surgery aided by the antibiotics. This symposium has considered the incidence and etiology of intravascular clotting and the complication of embolism. The medical and surgical management of peripheral vascular disease has been presented from several viewpoints.

CLASSIFICATION AND DIAGNOSTIC TESTS IN PERIPHERAL VASCULAR DISEASES*

PHIL B. BLEECKER, M.D., Memphis, Tenn.†

I. Conditions of Vasomotor Imbalance:
  1. Raynaud's Syndrome (vasospastic)
    A. Primary (idiopathic)
    B. Secondary
      a. Traumatic (air hammer disease, etc.)
      b. Nero vascular (cervical rib; hyperabduction syndrome, etc.)
      c. Secondary to organic vascular disease (thromboangiitis obliterans, etc.)
  2. Erythermalgia (vasodilator)
  3. Acrocyanosis
  4. Livedo-reticularis
  5. Scleroderma (?)

II. Organic Obstructive Diseases:
  1. Arteriosclerosis obliterans
  2. Thromboangiitis obliterans
  3. Arterial embolism and thrombosis
  4. Polyarteritis nodosa
  5. Aneurysms
  6. Arteritis
  7. Arteriovenous fistula

III. Miscellaneous:
  1. Frost bite—trench foot
  2. Hereditary hemorrhagic telangiectasia
  3. Glomus tumors
  4. Ergotism
  5. Cryoglobulinemia
  6. Lymphedema and others

IV. Diseases of Veins:
  1. Varicose veins
  2. Thrombophlebitis
  3. Phlebothrombosis

Symptoms and Signs

The symptom of *pain* is one of the most constant features of most types of peripheral vascular disease. Persistent pain is usually seen with ulceration and gangrene or with sudden arterial occlusion or arteritis. Intermittent pain which is dependent on temperature changes occurs with Raynaud's Syndrome (cold) and with erythermalgia (heat). Intermittent pain which is precipitated by exercise and relieved by rest is called intermittent claudication, and this may be a symptom of several of the organic vascular diseases. If the pain is brought on by posture it may indicate lymphedema or chronic venous insufficiency. Numbness, tingling or burning are variants of the pain sensation.

The patient may be timed with a stop watch and made to walk at a rate of 120 steps a minute and the time elapsing between the beginning of the test and the beginning of pain is known as the claudication time and this may be rechecked from time to time to denote progression or regression of the condition as well as in the evaluation of therapeutic agents.

The *color* of the involved extremity is often a helpful clue to underlying vascular disease. The blanched numb fingers after exposure to cold followed by erythema upon return to a warm environment established a likely diagnosis of Raynaud's Syndrome. The livid red hands with burning pain aggravated by heat is almost certainly erythermalgia. The chronic organic disorders such as arteriosclerosis obliterans or Buerger's disease will usually show a bluish, dusky discoloration of the foot when it is dependent. Conversely, when the foot is elevated above the level of the heart in a recumbent position and the foot extended and flexed rapidly, the sole of the foot, and sometimes the entire foot, will show a marked pallor that does not occur in a foot with good circulation. This is an important simple test of vascular insufficiency.

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

†From the Department of Medicine, University of Tennessee, College of Medicine, Memphis.

The *texture of the skin* of the extremities may be of diagnostic help since the skin may be atrophic, slick and shiny as in scleroderma, or there may be lack of sweating or increased local sweating and lack of hair growth. The brown discoloration about the ankles may be indicative of varicose veins of the extremity with venous insufficiency. The *nails* deserve careful attention since thickening or other impairment of nail growth may be suggestive of arterial insufficiency. The *temperature* of the skin can be roughly gauged by the examiner's finger or palm, comparing it to the opposite extremity or to the physician's own extremity. The serious organic disorders such as arteriosclerosis obliterans and thromboangiitis obliterans will reveal a cold extremity; the extremity in erythermalgia is very warm. Skin thermometers and thermocouples supply exact temperatures but are unnecessary for general use.

The *pulsation* in the peripheral arteries is to be carefully studied. A little practice will enable the examiner to gain proficiency in feeling the femoral, popliteal, posterior tibial and dorsalis pedis arteries. The level of disturbed pulsation enables the physician to localize the area of arterial obstruction. All the extremities should be observed for evidence of atrophy, swelling or differences in length. It is important that a complete general physical examination be done in addition to the study of the vascular system since the primary cause of the disease or disorder may be revealed in this manner.

Diagnostic Aids

Oscillometry: The use of the oscillometer is not essential to the diagnosis of most vascular conditions but it is helpful to numerically confirm the tactile impression of the pulsating vessel and to give readings for use in future comparison. It is important to realize that the oscillometer is only an adjunctive diagnostic aid and its limitations must be appreciated.

Arteriography and venography: Simple soft tissue technic radiographs may show arterial calcifications. More precise information may be obtained by injecting radiopaque materials into the arteries or veins and studying the major vessels and the collateral circulation. This is especially helpful in diagnosing aneurysms, arteriovenous anastomosis, and venous thrombosis, and presence and general configuration of vascular tumors. Numerous other adjunctive tests such as the histamine flare test, intradermal saline test and others have not been found to be specific and definitive enough to warrant routine usage. Other more complex and exacting studies such as fluorescein circulation time, capillary microscopy and the use of radio-active materials are informative for the investigator but not yet practical for the practicing physician.

Summary

The diagnosis of peripheral arterial diseases is not too difficult if a careful history is obtained with emphasis on the effect of position, exercise and temperature changes on the extremity pain. The physical examination should be thorough and complete and the simple diagnostic principles of inspection, palpation and auscultation applied to the extremities. Nearly always a diagnosis may be made without elaborate equipment and the more highly technical procedures are available for the more cryptic cases.

MEDICAL MANAGEMENT OF PERIPHERAL VASCULAR DISEASE*

ADDISON B. SCOVILLE, JR., M.D., and MORSE KOCHTITZKY, M.D.

One of the greatest challenges in the field of internal medicine is the proper management of diseases involving the peripheral circulation. Interest in this group of diseases has been stimulated not only by the magnitude of the problem, since the extremities constitute 35 per cent of the total body mass and 65 per cent of the total body surface, but also by the present emphasis on the pathogenesis of arteriosclerosis and on changes induced by psychosomatic disorders. In addition, improvement in methods and techniques by our surgical confreres has increased our ability to successfully manage these patients.

As recently as 1948, in a discussion of peripheral vascular disease, it was stated:[1] "This stepchild of medicine remains largely a subject for clinical observation, statistical analysis, and shotgun therapy. Emphasis has been placed on empiricism, dogmatism and treatment so that the literature is voluminous, conflicting, and unreliable." It is our purpose to present in this paper a rational medical regime for the management of peripheral vascular diseases.

Diet

The use of low caloric diets with a view toward maintaining normal body weight is of cardinal import in the management of patients with peripheral vascular disease. Obesity throws an additional load on extremities whose circulation is already impaired by chronic arterial or chronic venous insufficiency. In addition, control of the metabolic dysfunction in diabetes mellitus is mandatory if the vascular disease in these patients is to be treated successfully.

The use of low cholesterol diets and various lipotropic compounds are two types of therapy that have been advocated recently in arteriosclerosis. Although under certain circumstances dietary restriction of fat and cholesterol will depress the levels of serum cholesterol, it has never been established that this depression will affect arteriosclerosis in man. If such is the case, a patient who accepts this form of management has to make the decision that he is going to eat to live rather than live to eat. Recently it has been shown that an adequate protein component to the diet helps to maintain the blood cholesterol at lower levels.

Whenever it appears that our diets may produce disease we always want to take something which will allow us to continue eating what we want and not get into trouble. This explains the enthusiasm for choline, methionine, betaine, and inositol. Despite individual positive reports, there is no general agreement that these agents have any specific influence upon arteriosclerosis or serum cholesterol in man.

Tobacco

Clinical experience indicates that patients who have chronic occlusive arterial disease of the extremities such as thromboangiitis obliterans and arteriosclerosis obliterans do not get along well if they use tobacco in any form. The results of many experiments have shown that the use of tobacco produces profound results on the peripheral circulation.[2] Smoking causes a decreased volume of blood flow in the extremities and a decrease in the temperature of the skin of the digits due to vasoconstriction of the vessels. Slowing and stasis of capillary circulation may also result. There is some evidence that deep inhalation as in the act of smoking may produce vasoconstriction in the peripheral circulation. These influences from smoking persist for about 15 minutes. This physiologic evidence plus clinical experience would suggest that there is no alternative for the patient with occlusive arterial disease. He must not smoke.

Foot Care

Impoverishment of the circulation of the lower extremities is characteristic of many of the peripheral vascular diseases. In no field of medicine can it be stated more appropriately—"An ounce of prevention is worth a pound of cure." The proper care of feet and legs, especially in the arteriosclerotic, is worth more than all the drugs, machines and operations available now or in the foreseeable future. The following rules covering foot hygiene, avoiding injury, calluses and corns, and epidermohyptosis have been set forth by Duncan[3] and we feel that close adherence to them is most important for all patients with vascular disease of the lower extremities.

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A. FOOT HYGIENE
  (1) Take a warm (never hot) foot bath each evening and dry feet carefully.
  (2) Anoint the feet with toilet lanolin after bathing, once to three times weekly, to keep the skin soft.
  (3) Cut the toenails straight across.
  (4) Once weekly the feet should be powdered with talcum or fungicidal foot powder.
B. AVOID INJURY TO THE TOES AND FEET
  (1) Exercise care in cutting nails.
  (2) Wear comfortably fitting shoes made of soft leather.
  (3) Never place the foot on the floor except in a shoe or slipper.
  (4) Use care in the treatment for corns and calluses.
  (5) Never apply hot water bottles, heating pads or other external heating appliances to the foot.
  (6) Avoid irritating medications to feet, especially iodine, phenol and proprietary preparations for corns and calluses.
  (7) Prevent and correct epidermophytosis.
  (8) Avoid hose with raised seams.
  (9) Break in new shoes very gradually, one hour daily at first.
C. CALLUSES AND CORNS
  (1) Calluses are corrected by soaking feet each evening in warm, not hot, soapy water for 20 minutes and then rubbing surface tissues off with gauze.
  (2) Calluses are prevented by corrective supports, foot exercises, and properly fitting footwear.
  (3) Corns are corrected by properly fitting footwear, paring of cornified layer by chiropodist or other trained person, and separation of toes with lamb's wool.
D. TREATMENT OF EPIDERMOPHYTOSIS
  (1) Mild—treated with fungicidal foot powder.
  (2) Fissures—treated with fungicidal ointment.
  (3) Severe—treated with potassium permanganate sol. or one-half strength Whitfield's Ointment.

Physical Medicine

Peripheral vascular disease implies an imbalance between the metabolic needs of the tissue and its blood supply. Physical medicine offers several methods designed to correct this imbalance.

Heat may be used either directly or indirectly. The direct application of heat by any means including thermo-regulated foot cradles is potentially dangerous. If the increase in blood supply by vasodilatation is not greater than the increase in metabolic activity brought about by heat, tissue death is inevitable. The most frequent cause of gangrene is the injudicious use of heat. On the other hand, reflex heat or maintaining the environmental temperature at 80-85° F. is worthy of use. Advising a patient to place his hands and arms in hot water to warm his feet is sound advice. Here reflex vasodilatation is achieved without increasing metabolic activity.

The mechanical alteration of blood flow by exercise beds, venous compression, and massage is another method used in physical medicine. Probably the chief value of Buerger's exercises is to encourage the patient to care for his feet. Exercise such as walking up to tolerance is effective in increasing blood supply to the muscles. Passive vascular exercises and intermittent venous compression are not used often at the present time. The oscillating bed used intermittently or continuously is a most satisfactory form of mechanical therapy.

Psychosomatic Approach

It is hardly necessary to point out that peripheral vascular changes occur in relation to emotion. We continually see evidence of this in the blush of embarrassment, flush of anger, and blanching of fear. Wolff and Wolff[4] in reporting on their subject with a permanent gastric fistula reflected parallel simultaneous changes in his face and gastric mucosa.

Mittleman and Wolff[5] under carefully controlled conditions with both experimental and psychotherapeutic approaches demonstrated an immediate drop in skin temperature, reaching a maximum of 13° C. whenever their subjects were placed in a distressing situation. They found no differences in the skin reaction of patients with Raynaud's disease and other subjects except that Raynaud's patients showed pain and ulceration in the presence of lowered temperature in addition to blanching. They found that severe symptoms were produced neither with emotion alone nor lowered temperature alone but only with a combination of the two. This has important implications in the successful management of these cases. Psychotherapy especially if begun early, helps these patients who often give a history of early rejection by the family with resulting insecurity especially at times of crises. It should be remembered that sympathectomy in these patients does not turn off the emotional factor but rather shunts it off to a different channel. This is well illustrated by the patient with Raynaud's who had a sympathectomy and subsequently developed a duodenal ulcer.

Mann[6] has demonstrated experimentally in dogs that the area of the lumen of an artery may be reduced as much as 90 per cent before a 50 per cent reduction in blood flow occurs. After the constriction is sufficient to cause appreciable change in blood flow, additional constriction has a most marked effect. Since most diseases included in the group of peripheral vascular diseases are thought to be associated with vasospasm to a greater or lesser degree, any small effect in relieving spasm may mean the difference between life and death of the extremity.

The therapy of vasospasm is rational and usually highly effective. Dilatation of the blood vessels of the arm or leg may be effected by inhibition of the vasoconstrictor activity of the sympathetic nerves. The vasoconstrictor fibers leave the spinal cord with the anterior roots. From each of the anterior roots a white ramus communicans passes to the corresponding sympathetic ganglion. A gray ramus is the post-ganglionic connection to the spinal nerve, adjacent blood vessels, or sympathetic trunk.

Sympathetic activity may be paralyzed in one of three different locations. Spinal anaesthesia or infiltration of novocaine into the extradural space will prevent the conduction of vasoconstrictor impulses over the anterior roots.

The vasoconstrictor impulses may also be prevented from passing to the effector organ by block of the sympathetic ganglia. All impulses passing to the upper extremity may be blocked by novocaine infiltration of the stellate ganglion. Impulses to the lower extremity pass through the third lumber ganglion and novocaine block of this prevents vasoconstrictor impulses from acting on the vessels of the leg.

Distal to the sympathetic trunk the vasomotor nerves are too scattered to allow as complete inhibition of vasoconstriction although vasodilatation will follow section or novocaine infiltration of the major peripheral nerves. For the production of vasodilatation in the hand the median and ulnar nerves are most commonly selected, while the posterior tibial nerve is most readily blocked to cause vasodilatation in the foot.

Of the three sites where vasoconstrictor nerve fibers to the extremities may be blocked—the anterior roots, the sympathetic trunk and the peripheral nerves—the sympathetic trunk lends itself best to novocaine block, alcohol block or surgical approach.

Novocaine sympathetic blocks may be either diagnostic or therapeutic procedures. If, following block in any type of peripheral vascular disease, there is a skin temperature rise of 3° C. or more in a digit of the involved extremity good results can be expected with any procedure blocking the vasoconstrictor impulses. If there is partial or complete relief of symptoms with a rise in skin temperature of less than 3° C., repeated blocks are to be preferred to sympathectomy.

More recently the development of drugs capable of inhibiting sympathetic impulses has given new impetus to our studies of peripheral vascular disease. To better understand their mode of action it is wise to review chemical mediation of the nerve impulse. Both parasympathetic and sympathetic pre-ganglionic fibers release acetylcholine and therefore are cholinergic fibers. The sympathetic post-ganglionic fibers release sympathin, chemically similar to epinephrine, and are adrenergic nerves, whereas parasympathetic post-ganglionic fibers are cholinergic, releasing acetylcholine. The various drugs act in this system as blocking agents.

These blocking agents have certain disadvantages which make them relatively impractical for long term therapy in peripheral vascular disease. First, despite some reports to the contrary, they are rapidly excreted and therefore have a relatively short duration of action. Secondly, the undesirable side effects such as postural hypotension, constipation, impaired micturition, and visual disturbances are difficult to control while still achieving therapeutic results. Thirdly, selective vasodilatation cannot be obtained. This may be important in occlusive disease of an extremity where generalized vasodilatation may result in actual decrease of blood to the diseased area.

Tetraethylammonium chloride or bromide acts on the ganglion and may be given either intramuscularly or intravenously. Since too rapid injection may produce hypotension, epinephrine should be available for immediate use.

Hexamethonium (C-6) apparently acts at the ganglion, is extremely potent, and must be used with extreme caution. The recommended dose is given intravenously, intramuscularly, or subcutaneously.

Dibenamine acts both by blocking the post-ganglionic sympathetic pathway and by neutralizing epinephrine in the blood stream. It is best given by intravenous drip.

Priscoline acts by blocking adrenergic fibers, like dibenamine. The usual dose is given orally, intramuscularly, or intravenously.

Hydrogenated ergot alkaloids act centrally by lowering tone of the vascular system and peripherally by adrenergic blockade.

A new method of therapy[7] which has not as yet been widely used but which offers a method of opening collateral channels in a diseased extremity is the intra-arterial administration of 1 mg. of histamine base in 500 cc. of normal saline. The effect of the injection is localized by regulating the speed of administration and the material is bound and utilized in the tissues of the limb. This method has been used successfully in patients with intermittent claudication and in patients with nocturnal cramps. One of the objections to vasodilator drugs in treatment of obliterative arterial disease has been the possibility that the normal vessels may be more reactive than the diseased vessels, therefore, circulation to the diseased part may be diminished. The procedure of intra-arterial injection may overcome this difficulty.

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THE TREATMENT OF PHLEBOTHROMBOSIS AND THROMBOPHLEBITIS*

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Any discussion of the treatment of abnormal clotting within the vascular tree must of necessity entail a preliminary discussion of the normal process of blood coagulation. We all recall the very simple diagram we learned in Howell's textbook on physiology, stating that prothrombin forms thrombin in the presence of calcium and thromboplastin, and that fibrinogen in the presence of thrombin forms fibrin. We now realize that this very simple basic reaction is tremendously more complicated by virtue of the interplay of numerous enzymes and enzyme systems with their co-factors. Figure 1 is a fair representation of our present understanding of the coagulation of blood. Thus it involves a thromboplastin precursor which forms thromboplastin by virtue of an enzyme found in the platelets. It is furthermore thought that this platelet enzyme may be or is very similar to trypsin. With respect to the second portion of the reaction we now

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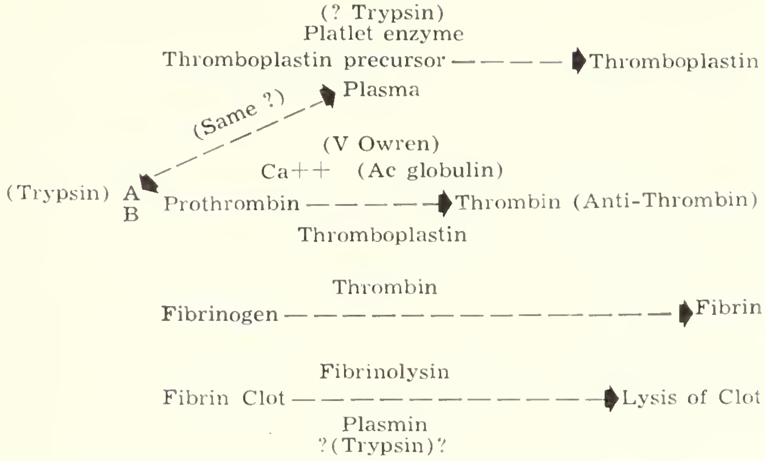

FIG. 1

know that there is both a prothrombin A and B which forms thrombin in the presence of ionized calcium and thromboplastin. It is in this phase of the reaction that the tremendously interesting work of Owren has been introduced to show that a fifth factor is also involved in this reaction which he called the factor V or accelerator globulin. Furthermore, we now recognize that there is a circulating antithrombin in the blood and it has been fairly decisively proven that this is not heparin. In addition, Ochsner and associates[1] feel that the antithrombin may be similar to an alpha tocopherol. The remaining portion of the reaction is quite the way we learned it, except for the fact that the Russians have shown that the fibrin clot which is formed undergoes lysis in the presence of an enzyme known also as plasmin or fibrinolysin.

The problem of the coagulation of blood is a fascinating one and is poorly understood. From a surgical point of view it would seem that the blood has an unusual faculty in doing just the opposite or what one wants it to do. If one wants it to clot, it frequently will not; if one does not want it to clot, it frequently does.

Seriously speaking, the problem of unwanted intravascular thrombosis, unfortunately, is ever with us and is a recognized cause of frequent hospital mortality and morbidity. We all know well the numerous factors predisposing to intravascular clotting. We have listed these as trauma (especially after operation), dehydration, infection, bed rest, neoplasms, age, heart disease and heart failure, obesity, and others such as anemia, abdominal distention, the use of tobacco and chilling. These factors are so well known that they require no particular emphasis, yet we all realize that freqently thrombosis occurs in a patient in whom none of these factors can be implicated. For example, bed rest has been frequently mentioned as a predisposing factor to thrombosis and yet the spontaneous thrombosis occurring in ambulatory patients has been witnessed by all of us. Nevertheless, with respect to the prophylaxis of intravascular clotting, it should be mentioned that meticulous attention to all of these factors in the preoperative and postoperative care of the surgical patient, and even perhaps more especially in the medical patient, will yield results in a lessened incidence of intravascular clotting in many patients.

Ochsner has repeatedly stated his conviction that a differentiation should be made between thrombophlebitis and phlebothrombosis. Ochsner as well as Loewe[2] have emphasized that the basic clot is composed essentially of platelets and leukocytes and represents the so-called white-head on which is superimposed a collection of red cells to form a friable red tail. As the clot grows, the soft red tail usually waves freely in the vascular current. If this thrombus does not become detached organization takes place with the fibroplastic proliferation and a firm adherence to the vessel wall which is ultimately followed by recanalization. If, however, the soft clot breaks off it is carried immediately into the swiftly moving blood stream and becomes an embolus,—usually producing a pulmonary infarction. If the clot obstructs the vessel and becomes firmly adherent to the wall of the vessel, the recognized picture of phlegmasia alba dolens occurs. The diagnosis of thrombophlebitis is not a difficult one and the condition is familiar to all. The diagnosis of phlebothrombosis is frequently a most difficult one and errors are made both in diagnosing a disease not present and in completely missing a disease which exists and is made manifest for the first time by a massive pulmonary embolus. It should be borne in mind that since the clot in thrombophlebitis is more firmly attached to the vein wall embolism is rare. Embolism is not unknown, however, in thrombophlebitis and disabling edema following this condition is sometimes a most taxing therapeutic problem.

The treatment of thrombophlebitis consists of the treatment of the local infection, especially fungus infection; hot packs and elevation are usually indicated as they make the patient more comfortable. Following the demonstration by Ochsner and DeBakey[3] that vasospasm is the factor producing the pain in venous thrombosis, lumbar sympathetic blocks have been widely used in the treatment of this condition. In many instances these will give a marked relief from the pain, with a dramatic subsidence of the edema present. It may be fitting here to comment on Ochsner's contention that instances of thrombo-embolism are increasing. He further believes that the increase in thrombo-embolism is due due to the increased routine use of antibiotics. He quotes Moldavsky et al. as having shown that penicillin causes an increased coagulability of the blood. An independent study by Rodes, Weidner, and McCleery[4] has pointed to the fact that a small percentage of patients who are given test doses of penicillin exhibit a coagulation time in a silicone-tube of 45 minutes or below, which is definitely short. Ochsner states that Macht and Farkas have shown that aureomycin causes a definite shortening of the blood coagulation time. This work, however, is opposed by the experimental findings of Bolkart, Weiner, and Lewis.[5] It is therefore obvious that this question is still debatable. The increased incidence of thrombosis in New Orleans may well reflect an increasing awareness of the disease.

With respect to the treatment for phlebothrombosis, three schools of thought exist. The first is that of the *laissez-faire* school and this is to be strongly condemned. Whether one feels that anticoagulants are indicated or that ligation is indicated, something should be done to prevent and to treat this insidious and dangerous disease.

The foremost of those advocating ligation are Allen[6] as well as Linton and Donaldson[7]. Allen advocates ligation in, 1) the presence of chest pain with no obvious cause, 2) in obvious venous thrombosis, and 3) in the so-called positive clinical chart sign, which is a rise in temperature, pulse and respiration which is otherwise unexplained. This author and associates have now had experience with 3,500 patients in whom they have tried by one means or another to prevent fatal embolism. In more than 1,500 cases in which the patient had already developed thrombosis of the leg veins, many of whom had had pulmonary emboli, the femoral veins were interrupted with thrombectomy. In this group there were 7 who died of further emboli, but Allen states that he would have expected 80 or more deaths. In another group for more than 1,000 patients who had fractures, carcinoma, etc., prophylactic interruption of the femoral veins was carried out. Five of these patients died of a massive pulmonary embolus, but Allen, using hospital mortality statistics, feels that more than 40 patients would have been expected to die. Dicumarol was used prophylactically in 647 cases and 2 of these died from hemorrhage, but none died from pulmonary embolism. Homans[8] believes that ligation of the femoral veins should be carried out in the presence of thrombo-embolic disease, but he does not believe in prophylactic ligation.

The usual site for ligation of the femoral vein in the presence of thrombosis of the deep calf veins is the superficial femoral vein. A bilateral ligation should be carried out and a concomitant thrombectomy should be performed. It is obvious that if the profunda femoris is involved, a common femoral ligation must be done. Linton has been the foremost protagonist of ligation of the common femoral vein. Homans has advocated ligation of the common iliac and inferior vena cava because of the persistent and troublesome edema following ligation of the common femoral vein. Veal[9] has also strongly recommended the more frequent use of ligation of the vena cava. With respect to prophylactic ligation, Allen[6] feels that it is definitely indicated, and Elkin[10] has stated that this procedure is indicated in elderly debilitated patients who must be confined to bed and in patients who have amputations, hip fractures, or prostatic surgery. On the other hand, prophylactic ligation is strongly opposed by Crutcher and Daniel[11] who point out that in 23 of 25 cases of fatal embolism reviewed at Vanderbilt University Hospital, the thrombi were found in the veins of the pelvis and upper abdomen and that prophylactic femoral vein ligation could not possibly have been of aid. This opinion is strongly supported by Vanderveer.[12] To carry the point further, Cummine and Lyons[13] feel that most pulmonary emboli do not arise in any of the peripheral veins, but originate primarily in the vessels at the lung bases, that is the pulmonary arteries.

With respect to the anticoagulants, we will deal with them very briefly. Dicumarol acts primarily by blocking prothrombin formation in the liver, and since its onset of action is delayed it necessitates treatment during the first 48 hours with heparin. Heparin, on the other hand, acts as an antithromboplastin, antiprothrombin and antithrombin. A discussion of the mode of administration of heparin excites violent outbursts from its various proponents. The Swedish School very successfully gives intermittent intravenous doses; Murray uses a continuous intravenous drip; others use heparin subcutaneously. (Holden, Duff, and Loewe); and the most popular recent innovation is the use of heparin in repository form.

Many articles demonstrating the efficiency of the use of dicumarol have been written, especially by Barker[14] of the Mayo Clinic, and such men as Loewe[2] and Bauer[15] have written profusely concerning the use of heparin as an anticoagulant.

I personally hold no brief for either dicumarol or heparing but can state that in my hands heparin has been the anticoagulant of choice. No doubt this is true since I have used this anticoagulant more frequently; my friends who use dicumarol find it to be of equal merit. The disadvantages of dicumorol is that its control is difficult and depends upon a meticulously performed laboratory test. Its advantages are its easy method of administration and its very low cost. The action of dicumarol can be overcome by transfusions of fresh whole blood and intravenously administered vitamin K. The advantages of heparin are its physiological action and rapidity and effectiveness of action when administered intravenously,—an effect which is gone within a few hours. The disadvantages of heparin are its expense, its control by means of the Lee-White clotting time, which is quite cheap but time consuming, and that is must be administered parenternally. The drug can fortunately be counteracted rapidly by means of protamine intravenously tn the case of heparin given intravenous and by the use of protamine, an ice bag and a tourniquet in the case of repository heparin. I have had on experience whatsoever with Tromexan.

Anlyan, Campbell, Shingleton, and Gardner[16] tried to solve the problem of thrombo-embolic disease by referring each case to a consultant committee. Fifty patients with thrombo-embolic disease were seen on the surgical and gynecological services of their hospital in a 12-month period; and of these patients, 43 were treated with anticoagulants alone and 7 were subjected primarily to venous ligation. Of the 7 ligated, five subsequently developed pulmonary emboli. Four of the patients had a bilateral ligation of the superficial femoral veins and three of these had pulmonary emboli following ligation,—one of the emboli being fatal. They furthermore quote the work of Urb and Schumann who studied 100 consecutive fractures of the neck of the femur and who ligated alternate cases bilaterally. There was no difference in the incidence of pulmonary embolism in these two groups. They feel that surgical ligation of the superficial femoral veins, either prophylactically or therapeutically, is basically unsound. Kirby[17] has pointed out that the final answer in this problem awaits the development of tests which indicate incipient thrombosis, so that some type of effective therapy can be instituted. Bauer[15] has used phlebograms in order to aid in the early diagnosis of thrombophlebitis, but deTakats[18] points out that diodrast is in itself an irritating agent to the vein wall. Many tests to determine or actually select the patients who are going to develop phlebothrombosis or who have developed phlebothrombosis have been tried. These include the employment of various heparin tolerance tests as advocated by Barker[14] and deTakats;[18] also the Waugh-Ruddick test, examinations designed to disclose changes in the blood antithrombin level (Kay's test), changes in the prothrombin time as advocated by Sandrock and Mahoney, changes in blood viscosity (Shadid), the demonstration of fibrinogen B (Cummine and Lyons) as well as changes in the blood coagulation, (Loewe, Kadish, Margolies, and Barker). After the publication of any one of these articles, a subsequent article has appeared which served to disprove the contentions.

It is therefore apparent that there is no final answer to this tremendous problem. Neither the therapeutic nor the prophylactic treatment of phlebothrombosis and thrombophlebitis has been settled and I feel in the final analysis one must approach the patient with thrombo-embolic disease with a plan of treatment characterized by individualization and eclecticism. It is not my intention to deliberately confuse, but one cannot be dogmatic about this vital but controversial subject.

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THE PROBLEM OF PULMONARY EMBOLISM: EVALUATION OF VENA CAVAL LIGATION*

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Since Homans called attention to the clinical entity of pulmonary embolism in 1934,[14] much has appeared in the medical literature concerning venous thrombosis and its sequelae. The many suggestions for prevention and treatment reflects the accomplishments thus far. There has been little change in the incidence of fatal pulmonary embolism during the past twenty years in several comparative adequate series.[1,3,12] The continued mortality has occurred despite vigorous efforts directed at prevention such as early ambulation, careful examination of the lower extremities in the chronically ill and postoperative patients, prophylactic anticoagulants, prophylactic vein ligation, and various laboratory tests aimed at foretelling incipient thrombo-embolic disease.

After thrombo-embolism is evident the treatment has likewise given far from desirable results. Therapeutic measures such as pulmonary vasodilators, elevation of the lower extremities, anticoagulants, and venous ligation have all been employed with conflicting results. When we are confronted with a disorder in which from 40 to 80 per cent of the fatal cases have no clinical signs or warning of thrombosis, it is apparent that *prevention* must be foremost in our minds.

Incidence

In approximately 10 per cent of all necropsies some evidence of thrombo-embolic disease is found.[4] More occur among surgical patients, but when corrected for hospital admissions pulmonary embolism has an incidence of 2.96 per thousand among surgical admission and 2.88 per thousand among non-surgical admissions. According to Lillie and Buxton the general surgical and the cardiac patients are the ones who still contribute the bulk of the incidence.[4]

Crutcher and Daniel at Vanderbilt found that in 55 autopsied cases of fatal pulmonary embolisms, only 25 were in postoperative patients.[11] Kirby and Fitts have stated recently that fatal emboli accounted for 7.5 per cent of all surgical deaths.[1] During the period from 1925 to 1945, fatal pulmonary embolus occurred at the rate of one in 1,200 operations. After intensive preventive measures were instituted in 1946, the period of 1946 to 1949 inclusive resulted in the increased rate of one fatal embolus in 778 operations. Thrombo-embolic disease occurred during the latter period at the rate of one in 140 operations.[1] Recently Allen reported on 2,929 patients who had received specific preventive or therapeutic measures for venous thrombosis at Massachusetts General Hospital, but despite this very concerted interest there had been no change in the ratio of deaths from pulmonary embolism during the past decade. Allen states that this is due to the fact that, (a) fewer patients die of shock, pneumonia, and infection so that they live long enough to develop phlebothrombosis and, (b) the increase in the proportion of aged people admitted to hospitals thereby increases thrombo-embolic incidence.[3]

The age incidence of patients having pulmonary embolism ranges from 20 to 70 years but is rarely seen under 35 years of age. The male predominates in about a 3 to 2 ratio in spite of the fact that thrombophlebitis is more prevalent in the female. Welch and Faxon found that one patient out of three with phlebitis suffered pulmonary infarction at some stage of the disease.[9] At the Mayo Clinic in a study of 1,665 cases of pulmonary embolism it was concluded that once a *non-fatal* embolism has occurred, the chance that a *fatal* embolism will follow is about one in five. The chance that a subsequent embolism, fatal or non-fatal, will occur, is about three in ten. Then if all fatal embolism which is preceded by clinically diagnosed non-fatal emboli could be prevented by therapeutic efforts, the total number of fatal embolisms would be reduced by more than one-third.[10]

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Statistically, then, it is possible for the pathologist to show that just as many deaths from pulmonary embolism occur now as ten years ago, but equally as true many clinicians can demonstrate that hundreds of patients are living, as a result of their efforts, who would have certainly died from embolism if left untreated.

Etiology

It is now generally felt that three factors are most important in venous thrombosis, i.e., (a) slowing of the venous blood stream, (b) injury to the intima of veins, and (c) changes in the composition of the blood.[4] Other predisposing factors are age, obesity, the weather or season of the year, operations of great magnitude and duration, cardiac disease with diminished cardiac output, venous varicosities, crushing injuries, retroperitoneal tumors, operation on major vessels, arterial embolism, inactivity, abdominal binders, advanced malignancy, excessive narcotics and anemia.

Pathology

In thrombophlebitis the clot is firmly attached to the vein wall and is not as likely to become detached except in suppurative thrombophlebitis. In pure thrombophlebitis fatalities are rare but disabling sequelae are common if adequate measures are not undertaken. It is thought that most cases of thrombophlebitis have a superimposed "bland thrombus" similar to that found in the phlebothrombosis. In phlebothrombosis the intravenous clot is a coagulation thrombus resulting from two factors, one predisposing and the other precipitating. The predisposing factor is increased coagulability of the blood resulting from high levels of thrombokinase and increased adrenal cortical stimulation. The precipitating factor is circulatory stasis which accounts for the pelvis and lower extremities being the most frequent site.[12]

The severe symptoms and sometimes death in pulmonary embolism may be explained at least in part from the following changes. The dislodged clot occludes the main pulmonary artery at the conus or one of its right or left branches. Asphyxia then results when the infarcted area becomes non-functional. Failure of the right side of the heart may occur in the face of a rapidly rising pulmonary arterial pressure. This leads to peripheral circulatory failure due to insufficient venous return to the left atrium. At this time the various autonomic reflexes that may be caused by even very small emboli are set off resulting in vagal stimulation, bronchconstriction, increased bronchial secretion, inhibition of the heart, depression of the blood pressure, and spasm of smooth muscle sometimes even producing intestinal colic. In non-fatal emboli the sequence of infarction, pleurisy with effusion, lung necrosis, abscess, and later, fibrosis with healing is common. Small emboli usually cause death only in the severely ill or debilitated patient.[7]

There is a wide variation in the relative incidence of the origin of fatal pulmonary emboli. In one series the origin was found to be below the profunda femoral orifice in 51 per cent of instances and above this orifice in 49 per cent.[11] More recently the pelvic veins have been found to be more frequent offenders than previously.[16]

Symptoms and Signs

A discussion of the symptoms and signs of pulmonary embolism must necessarily be closely related to those of venous thrombosis. The symptomatology and findings may be divided into (a) those confined to the lower extremities, (b) those resulting from pelvic thrombosis, and (c) pulmonary manifestations.

To present the clinical picture of thrombophlebitis and phlebothrombosis is not the purpose of this paper. It appears appropriate, however, to mention calf pain or tenderness, edema, thigh pain or tenderness, Homans' sign, changes in the consistency of the calf musculature, and tenderness in the femoral triangle as the most likely significant findings.

In pelvic vein thrombosis some investigators have emphasized edema in the lower extremity extending up into the groin, lower abdominal pain or tenderness, and hyperthesia and paresthesia along the distribution of the lumbar nerves.[5]

In the postoperative patient the symptoms and signs of pulmonary embolism may occur at any time from the first day until several weeks in the postoperative period but the large portion occurs between the fourth and fourteenth days postoperatively. Pulmonary manifestations of thrombo-embolic disease should attract our interest more in this discussion. The *classical* picture is easily recognized with rather sudden onset of severe chest pain, frequently after a change in position, followed by dyspnea, cyanosis, a feeling of impending disaster, and occasionally syncope. If the patient survives for a few hours there is about a 50 per cent chance that a hemoptysis, consisting of bright red blood streaked sputum, will occur. As the acute phase subsides there are frequently rales and a friction rub heard over the infarcted lung with one of the lower lobes being the site in most cases. The chest X-ray is of help only if an infarct is seen. A normal appearing chest film may mean nothing at all. Pulmonary embolism in a varying number of cases cannot be verified roentgenologically. Occasionally findings do not appear until two to five days after embolism. The findings on the chest X-ray of so-called obstructive atelectasis, pleural effusion, or bronchopneumonia resistant to antibiotics should make one suspicious of a pulmonary infarct in spite of the absence of leg or pelvic signs of thrombosis.

With the *atypical* findings we encounter the most difficult problem. After an episode which is suggestive the clinician must ask, "Has the patient had a pulmonary embolism?" Leg symptoms and signs may be absent. There may be a minimal amount of localized pleuritic pain with or without audible confirmation of infarction. Cyanosis and dyspnea are not constant findings. The patient in whom there has been an unexplained increase in respiratory rate, pulse rate, or temperature, not explicable in the patient's course, should be regarded with suspicion. Not uncommonly the symptoms are more typically those of cardiac or upper abdominal disease. The electrocardiogram can help confirm a diagnosis of embolism in about 20 to 30 per cent of the instances. The findings are identical with posterior myocardial infarction except that in embolism the changes appear soon and disappear in two to six days.

The clotting time as determined in a uniform, consistent manner is frequently an aid in confirming thrombo-embolism during one of these anxious periods of decision. This is only an adjunct to the other examination but is of help in many cases. If a patient has suggestive pulmonary or peripheral signs of thrombo-embolic disease, a silicone tube clotting time which is abnormally low may help make the diagnosis.[19] A normal clotting time on the other hand may be of no aid and does not rule out the possibility of an embolus. The decision that a patient had had a pulmonary embolism in equivocal cases is made after all clinical and laboratory evidence has been amassed. The appropriate treatment must then be undertaken without delay.

Prevention

It is now obvious that prophylaxis in venous thrombosis has not been totally accomplished by the widely used precautionary measures now employed. One may then assume that further reduction in incidence will occur only after the prophylactic use of venous ligation or anticoagulants. The use of either of these methods alone or combined *on every patient* chronically ill or undergoing surgery seems hazardous and ill advised. In addition it is not always desirable to select only those patients with specific diseases or specific operations. From a practical standpoint the facilities for this prophylaxis must be available to all. Preventive measures then must be simple, readily available, reasonable in cost, and effective.[4]

Adequate prophylaxis should include the following: (1) preoperative preparation with restoration of body fluids, electrolytes, and blood volume; (2) careful placement of the patient on the operating table to prevent stasis of blood or poor venous return; (3) the use of Halstedian surgical technique avoiding mass ligatures, undue trauma to tissue and vessels, and the prevention of hypotension and circulatory collapse; and

(4) postoperative attention which includes the following:

a) Trendelenburg position until patient can move actively.
b) Deep breathing every half hour to increase venous return.
c) Prompt replacement of blood and fluids.
d) Active leg exercises soon after reacting; passive movement is not sufficient.
e) Avoidance of heavy sedation or abdominal distention.
f) Compression bandages on legs in hazardous cases.
g) Early abmulation.
h) Careful periodic examination of the lower extremities.

Some investigators have called attention to the decrease in circulating antithrombin following operative procedures. According to work of Kay and Ochsner this causes an increased tendency toward venous thrombosis and can be corrected by the prophylactic administration of alpha tocopherol with calcium which acts as an efficient antithrombin.[12] Others have been unable to confirm this.[17, 18] We have had no experience with this procedure.

Prophylactic anticoagulants, namely heparin and dicumarol, are advocated by others. Dicumarol has been used prophylactically with some success in reduction of venous thrombosis incidence but to offer a satisfactory approach it must be used expertly and meticulous care is mandatory.[15] Heparin prophylactically is probably a much safer drug. One must bear in mind, however, that a drug used to induce a controlled hemorrhagic state which combats a transitory physiological clotting tendency is hazardous by its very nature.

Treatment

The therapy or care of the patient who has suffered a pulmonary embolism may be divided into the immediate measures and the definitive measures.

Immediately we must depend on nasal oxygen for the anoxia, papaverine as a pulmonary vasodilator, atropine to block vagal reflexes, and general nursing measures such as a position lending to less dyspnea.

For definitive therapy these patients must necessarily be considered as belonging to one of these categories:

1) The patient with one or more recent emboli who has received *no* anticoagulant therapy or *inadequate* anticoagulant therapy. Treatment: heparin adequately administered for fourteen days with ambulation on the eleventh day is usually effective in preventing further emboli. In resistant cases of recurrent phlebothrombosis, prolonged therapy with dicumarol should be considered.

2) The patient who has had an embolus *during* adequate anticoagulant therapy. Treatment: ligation of the inferior vena cava followed by anticoagulant therapy. Heparin may be started immediately after ligation and is continued for four to six days. Exploration or ligation of the superficial femoral, common femoral, or iliac veins is becoming an unsound measure and may have no place in ligation therapy.[17]

3) The patient with one or more recent emboli in whom anticoagulant therapy is *contraindicated* or is not feasible such as post partem period, postoperative prostatectomy, or combined abdominoperineal resection, postoperative brain or spinal cord cases, severe hepatic or renal disease, and suppurtive thrombophlebitis. Treatment: ligation of inferior vena cava without anticoagulants.

In following these criteria for therapy, it is probable that most can be handled with non-operative anticoagulant therapy. In a recent report forty-three (86%) of fifty cases of thrombo-embolic disease were treated successfully with anticoagulants alone.[17]

Inferior Vena Caval Ligation

The first recorded ligation of the inferior vena cava was performed by Kocher in 1883 with an incidental ligation during a retroperitoneal node dissection. Bottini, in 1893, is credited with the first successful ligation and survival of the patient. Since that time Trendelburg and others have helped to develop the operation and its indications.

The procedure of vena cava ligation is simple and may be performed in most cases under a spinal anesthetic through a right extraperitoneal approach. An oblique muscle splitting incision is used and the peritoneum and ureter are retracted medially.

As the psoas major muscle and genitofemoral nerve are exposed the inferior vena cava is brought into view. Double ligatures of heavy silk are passed around the vessel and it is doubly ligated below the renal veins. If a thrombus is felt in the vena cava, the ligature must be placed proximally with great care being taken not to dislodge the clot.

After ligation of the vena cava the two logical questions which arise are those of maintaining adequate collateral circulation and prevention of further thrombosis proximal to the ligature or within the collateral channels. For this reason anticoagulant therapy is continued for four to six days following ligation.

The problem of collateral circulation has not been a difficult one in most cases thus far. The available collateral pathways will help to explain this. These channels are divided into three groups which may be known as the superficial, the deep, and those of the ascending lumbar trunks. In the *superficial* group the most prominent components are the superficial epigastric and the superficial circumflex iliac veins which connect the saphenous with the superficial veins of the upper abdominal wall and the lateral thoracic vessels. The *deep* group is composed of the deep circumflex iliac, the inferior epigastric, and lumbar veins joining the external iliac with the internal mammary and ascending lumbar group. The *lumbar* group consists of the ascending lumbar veins which arise from the inferior vena cava at the sacral promontory and establish communications between the sacral, common iliac, hypogastric, and iliolumbar veins at inferior levels while at higher levels they join the true lumbar veins and right renal vein. The left trunk becomes the hemiazygos as the right trunk becomes the azygos vein and these ultimately empty into the superior vena cava. Other well established deep collaterals are those of the vertebral system including the large internal plexus on the surface of the dura. The ovarian veins, in the absence of thrombosis, serve as important collateral pathways.

The treatment following vena caval ligation may be divided into the immediate and the long term. Immediate care usually involves the following:

1) Maintenance of fluids and blood pressure.
2) Elevation of lower extremities.
3) Wrapping of lower extremities from toes to groin.
4) Bicycle exercises beginning on first postoperative day.
5) Ambulation on the fourth or fifth day with legs and thighs wrapped.
6) Paraspinal block if evidence of vasospasm is present.
7) Anticoagulant therapy until ambulatory in certain patients.
8) Antibiotics.

Long term care must include the following:

1) Periodic leg exercises.
2) Elevation of lower extremities at night.
3) Wrapping of legs and thighs during the day.
4) Avoidance of a static, dependent position for the lower extremities.

Comment

Ligation of the inferior vena cava has been carried out in fourteen patients during the past four and one-half years and we believe that the results are encouraging enough to justify a brief review. There were twelve males and two females. The age range was twenty-one to sixty-nine years with an average of fifty years. Eleven patients had symptoms or signs of venous thrombosis. Six of these patients had anticoagulants before caval ligation and six had anticoagulants following ligation. One patient had a questionable infarct after ligation and he had received no anticoagulant.

The operative mortality was one or 7 per cent, this being due to an embolus on the operating table during the induction of the anesthetic. This was proven at auopsy. The mortality rate was four or 28 per cent, but three of these deaths were attributable to malignant tumor. Five of the group had cancer, i.e., two of the prostate, one each of the kidney, stomach, and lung.

In the follow-up of the ten patients who remain alive the period has ranged from eight weeks to four and one-half years. Nine of the group of ten have minimal edema controlled by elevation of extremities and bandages. The tenth patient has no edema. Two patients have had chronic ulceration of the lower extremity but only one has persisted. This ulcer is small and the patient refuses to have it treated surgically. The edema in this patient is minimal and a bandage is not worn regularly. Both of these patients had pre-existing phlebitis and one had a varicose ulcer before ligation. Eight of the ten patients are back to normal activity. The activity of one is curbed due to a prosthesis on the left hand and discomfort in his right leg on standing for long periods of time.

Conclusion

Thrombo-embolic disease is an extremely hazardous condition for which the treatment has been rather unsatisfactory thus far. Even though prevention is foremost in our minds we are still confronted with many clinically confirmed cases of thrombo-embolism. Most of these may be controlled with anticoagulant therapy if given wisely. The remainder must be subjected to some form of therapy which goes a step further. In our opinion ligation of the inferior vena cava answers this adequately. Other ligation therapy does not.

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ARTERIAL EMBOLISM*

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One of the most dramatic conditions in peripheral vascular disease is arterial embolism.

The problem of arterial embolism is not a new one. Due to the lengthening of life expectancy by many new drugs, and increased medical knowledge extending the life of persons with severe myocardial damage, especially of rheumatic heart disease, the problem will probably occur more frequently in the future.

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Etiology

Most arterial emboli arise in the left side of the heart in patients who have a severely damaged endocardium due either to rheumatic fever or to myocardial infarction with mural thrombi. Statistically it has been shown that most of these patients have auricular fibrillation and that they usually undergo a change in rhythm which causes the thrombus to be dislodged into the peripheral blood current. Madden[3] and others believe that a large number of patients, particularly those who throw repeated arterial emboli, form them in the left auricular appendage. Paradoxical embolism is a pathological curiosity, the embolus from the right heart passing through an interventricular septal defect. In the arteriosclerotic patient emboli sometimes arise from thrombi forming on arteriosclerotic plaques in the aorta which break off and pass into smaller arteries. It is significant that many patients are using a bed pan at the time the embolus is dislodged.

Signs and Symptoms

As the embolus passes peripherally it continues until it lodges in a narrowed portion of artery. Thus emboli are likely to "straddle" the bifurcation of an artery and block one or both arteries. This leads to sudden pain in the part supplied by the occluded artery. Within a few minutes there is pallor (a white, "cadaveric" appearance), numbness, tingling, and increasing coolness; usually in thirty minutes to one hour anesthesia and paralysis occur in the involved extremity. Absence of arterial pulsation is a valuable sign. Arterial spasm, distally, rapidly follows the lodging of an embolus. This plus the clotting of blood in the distal to the embolus usually complete the arterial obstruction which may have been incomplete at first. The degree of signs and symptoms depends on the collateral circulation and whether the artery is completely blocked. Since most of these patients are already critically ill and often are partially disoriented, nurses and attendants frequently fail to attach the proper significance to their complaint and much valuable time is lost.

Localization of the Obstructing Embolus

Localization of the exact site of the embolus is important to the surgeon. Emboli usually lodge at the bifurcation of arteries, but because of collateral circulation the embolus is usually higher than the cold pulseless area. This is very important because one might think that the embolus is lower than it really is, therefore leading to misplaced incisions. Usually the arterial pulsation can be felt down to the embolus and distal to that no pulsation is present. However, there may be transmitted pulsations beyond the embolus with no blood flow. A comparison with the artery in the normal extremity usually reveals a marked difference in pulsation. The most common site of embolization (Fig. 1) is at the division of the common femoral artery into the superficial femoral and profunda femoral artery. In our series of 13 embolec-

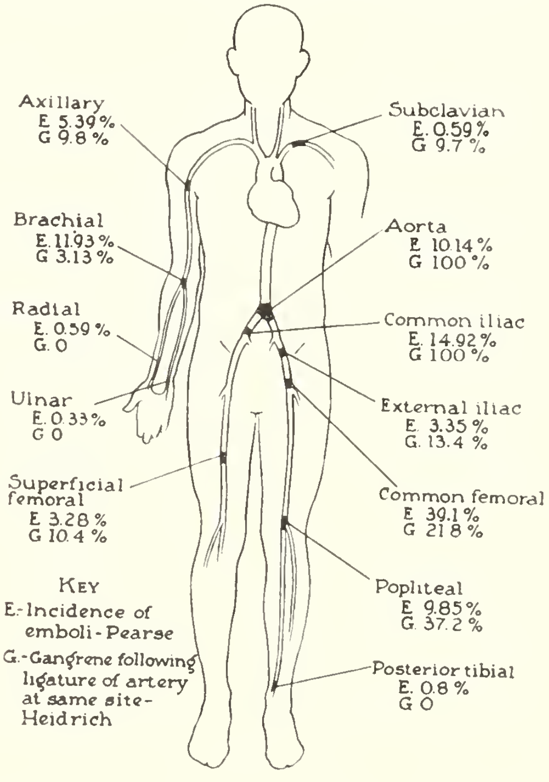

FIG. 1

Sites of peripheral emboli together with percentile distribution at various levels and percentage of gangrene following ligature at the same site. The embolus, however, is always more dangerous to viability of limb than the ligature, because its extent and propagation block collaterals which remain unobstructed following division of artery. (From deTakats, G.: Acute Arterial Occlusions of the Extremities, Am. J. Surg., 33:60, 1936.)

tomies, 7 or 54 per cent occurred in this area. Despite the fact that the embolus is in the femoral artery at its deep and superficial divisions, most of the signs and symptoms become manifest at a level either just above or just below the knee. The next most common site for embolization (Fig. 1) is in the iliac artery as the hypogastric is given off. The most difficult differentiation is between an arterial embolus and thrombosis on an arteriosclerotic plaque of the artery in question. Usually the history of sudden onset in cases of arterial embolus as opposed to gradual onset in arterial thrombosis is the most helpful point, but here again most surgeons can recall examples of each in which the history was misleading.

Table 1 lists the differential diagnosis between embolism, thrombosis, arteriospasm and occlusion of an artery due to arteriosclerosis giving points of interest in the differential diagnosis in each of these cases. Although the proper diagnosis can usually be made, this is not always possible.

Treatment of Arterial Emboli

As in all diseases the treatment must take into consideration "the patient as a whole." Treatment resolves itself into two methods, (a) operative removal of the embolus (embolectomy) or (b) conservative treatment. Regardless of the method used the mortality is high as compared to common surgical procedures.

The first successful embolectomy was performed by Labey in 1911 followed by another by Key in the same year. The operation had been attempted as early as 1895 by Abenejew.

Nystrom reported a 50 per cent survival of the extremity in patients with embolectomy operated upon within 10 hours, as opposed to 10 per cent survival of the extremity in those patients treated conservatively.

Ligation of arteries is followed by gangrene in the following percentages as demonstrated by Heidrich (Fig. 1). The incidence of gangrene following embolus is higher than in simple ligation because of the added factors of arteriospasm and the extension of thrombosis to involve the collateral blood supply. (This chart shows the percentage of peripheral emboli lodging in various arteries, those in viscera are not included.)

The shorter the time interval from embolization to operation the better the expectancy for restoring circulation to the involved part. Most observers have found that operation within 10 hours results in about 40 to 50 per cent survival of the extremity, whereas operation over 24 hours after embolization gives very little chance of restoration of blood flow through the involved artery. Regardless of whether embolectomy is to be done, papaverine 0.5 to 1

Table 1

DIFFERENTIAL DIAGNOSIS

Diagnosis	*History*	*Physical Examination*	*Course*
Embolism	1. Uusually acute sudden onset measured in seconds or minutes. 2. May have history or coronary occlusion, change in rhythm or rheumatic fever. 3. May have history of previous embolus.	Cool cadaveric extremity with possible paralysis. Absentee of pulsations below occlusion.	Rapid progression with increasing signs over 1-2 hours. Will usually improve only slightly, if at all, with sympathetic blocks. May go on to paralysis and gangrene.
Thrombosis	Onset not so sudden. May take as long as hours.	Same as above.	Progression over several hours; otherwise same as above.
Arteriospasm	Sudden onset usually has history of trauma, i.e., direct blow, operation, or injection, concurrent venous dis.	Site of previous trauma may be apparent. Otherwise same as above.	Clears very rapidly with sympathetic block.
Arteriosclerotic occlusive disease	Long history, very gradual onset with previous intermittent claudication.	Evidence of generalized arteriosclerosis, decrease to absence of pulsation bilaterally.	Very little progression over many hours. May or may not show improvement with sympathetic block.

grain should be given to help relieve arteriospasm. The use of heparin in the prevention of further thrombosis probably outweighs the tendency to bleed. It certainly should be given in those treated conservatively. Heat should not be applied to the involved extremity as this speeds up the metabolic rate and decreases the period of viability of the ischemic tissue. The head of the bed should be raised six to twelve inches to increase the circulation if the lower extremity is involved.

Because of the serious condition of these patients most operations on peripheral vessels should be done under local anesthesia,—and on the aorta or iliacs under spinal anesthesia.

When the vessel is exposed and the embolus palpated, the adventita should be completely removed from the site at which the artery is to be opened. (Fig. 2.) (This drawing shows an embolus at the bifurcation of the aorta. Notice that rubber tissue drains are placed above and below the embolus to control bleeding and dislodgement of the embolus.) It is probably better to open the artery in one of the branches rather than in the main artery so that a thrombus formed at the site of opening of the artery might not block both branches. The artery is opened after rubber tissue drains as tourniquets are applied and the clot gently removed to prevent injury to the intima. The proximal and then the distal tourniquets are relaxed momentarily to insure that there is blood flow. If no blood flows back distally a piece of embolus or thrombus is occluding the artery distally and this must be removed either by suction on a flexible catherer or by another incision. Arterial closure is accomplished with 5-0 arterial silk everting suture with intima-to-intima closure. Pulsation should be present in the artery distally after the tourniquets are removed. Fifty milligrams of sodium heparin are injected into the artery proximal to the operative opening. A periarterial sympathectomy should then be completed. After operation papaverine is continued and depot-heparin is given in an amount sufficient to maintain the clotting time above thirty minutes by the Lee-White method. Lumbar sympathectomy should be carried out at the time of operation if the lumbar chain can be reached from the operative field. Otherwise lumbar blocks every six hours seem to offer some increase in the survival rate. Frequently even though the clot is removed and circulation restored, arterial pulsations do not return in good volume for several days in spite of sympathetic blocks. In this case a lumbar sympathectomy several days after embolectomy probably reduces the incidence of thrombus at the operative site.

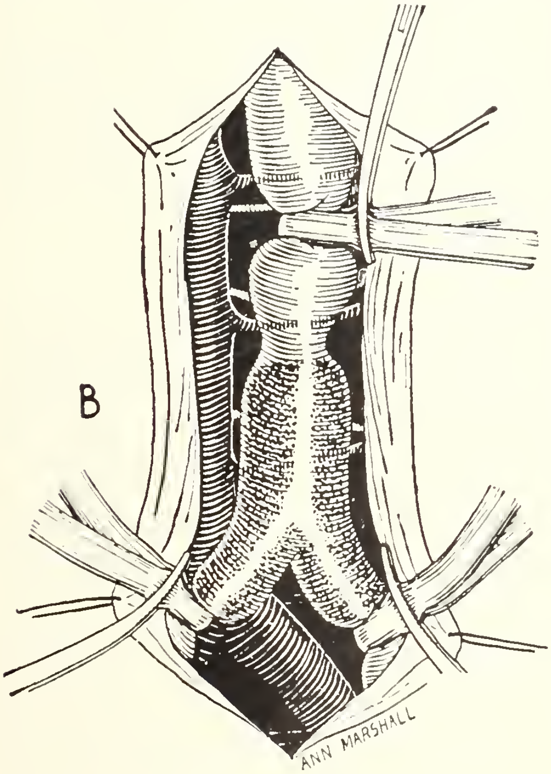

FIG. 2

View of Aortic Embolectomy showing control of blood supply above and below site of incision. (From Wilson, H.: Aortic Embolectomy Successful Removal of Saddle Embolus by Transabdominal Route, J.A.M.A., 141:389, 1949.)

If thrombosis is present, removal of the thrombus offers very little chance of maintaining continuity of the artery. It is probably better to ligate the artery, divide it, give heparin, and do sympahetic blocks or a sympathectomy. Shumacker[5] and others report the case of vein grafts after excision of localized areas of thrombosis.

Case Reports

Table 2 gives a brief summary of 13 pa-

Table 2

REPORT OF 13 EMBOLECTOMIES FOR AORTIC EMBOLI

		Source				
Location	*Number Cases*	*Heart Endocardium*	*Aortic Plaque?*	*Subsequent Embolization*	*Loss of Extremity*	*Loss of Life Within 3 Wks. of Operation*
Common femoral artery	7	6	1	2	2	2
Common iliac artery	5	4	1	1	1	2
Aorta	1	1	0	1	0	—
Total	13	11	2	3	3	4
Per Cent of Total	100	85	15	23	23	30

tients who had arterial embolectomy performed within the first thirty-six hours after onset of symptoms. It is pointed out that 46 per cent of the patients returned to their pre-embolus status; 23 per cent lost an extremity and 30 per cent died during the first three weeks postoperative. It must be remembered that these patients were in very poor general condition and at times the care of these patients can be trying. One of our patients, previously reported,[4] had successive emboli in the right femoral, at the bifurcation of the aorta, and in the left femoral arteries at intervals of from three days to two weeks. These emboli were removed only to have the patient die five weeks later with an embolus to the superior mesenteric artery. One of our patients illustrates how extensive the propagation of the thrombus may become. This patient had an operation for removal of an iliac embolus with propagation of the thrombus eighteen hours after onset. Figure 3 shows the thrombus measuring 48 cm. with emboli proximal to it; propagating thrombosis into the branches of the iliac and femoral arteries can also be seen. This patient showed a remarkable recovery of the circulation of this leg with no loss of tissue only to die four weeks later from cardiorespiratory failure and terminal bronchopneumonia. This patient illustrates the importance of early diagnosis in preventing propagation of thrombosis and the probable desirability of heparinization, if feasible, at the same time the diagnosis of embolization is made. Shumacker[5] suggests that heparin should be given to all patients, even to those who are to have surgical treatment and certainly it should be given if conservative treatment is to be used.

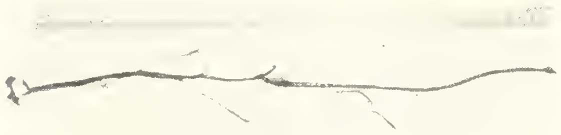

FIG. 3

Photograph of specimen removed at operation. Embolus (on left) with propagating thrombus (on right) measuring 48 cm. Bifurcation at 20 cm. is that of superficial femoral (long) and profunda femoral (short) arteries.

The treatment of arterial embolism resolves itself into the following components: (a) restoration of the continuity of the artery whenever possible at the earliest moment; (b) the prevention or relief of the accompanying arteriospasm by peri-arterial or lumbar sympathectomy, or by lumbar sympathetic blocks; (c) prevention of thrombus distal to the embolus and thrombosis extending into the collateral arteries by the use of heparin; (d) removal of the cause of the emboli whenever possible. Excision of the auricular appendage for emboli arising in it has been suggested by Madden. Certainly in cases of myocardial infarction prolonged anticoagulant therapy, until there is re-establishment of endothelium over the scarred area, might prevent further embolization.

Conclusion

(1) Arterial embolism usually occurs in an otherwise critically ill patient and presents a surgical emergency which threatens life and limb. Even in such a patient embolectomy should be performed at the earliest possible time to obtain best results.

(2) The conservative approach to this problem carries a much higher mortality than the operative treatment even in a critically ill patient.

(3) Resection of the auricular appendage might offer some benefit in recurrent arterial emboli in some cases.

(4) Prolonged anti-coagulant therapy will decrease the incidence of recurrent embolization especially after myocardial infarctions.

(5) Thirteen patients with arterial emboli who had their emboli removed within 36 hours of onset are briefly reported.

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SURGICAL PROCEDURES FOR PERIPHERAL VASCULAR LESIONS*

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Many surgical procedures have been advocated for peripheral vascular lesions. While it is beyond the scope of this paper to enumerate them all, we shall discuss those presently in use, even though some are still controversial and to some extent experimental.

The pre-operative vascular study should include careful evaluation of the patient's statements regarding intermittent claudication, changes on cold days, color changes, previous trauma to extremities, amount of smoking and presence or absence of pain at night. In addition to a complete examination and determination of the presence or absence of peripheral pulses, the following tests may be of value in estimating the severity of organic lesions: (1) effect of elevation in determining the "angle of circulatory sufficiency"; (2) oscillometry or plethysmokymography; (3) arteriography; (4) skin temperature studies. The evaluation the last three tests will be discussed under specific disease entities.

Among the many suggested surgical procedures for peripheral arterial lesions, the following seem most worth-while: (1) preganglionic sympathectomy; (2) thromboendarterectomy for segmental thrombosis; (3) arteriectomy for obstructed segments; (4) trans-metatarsal amputation for existing gangrene; (5) embolectomy.

I Preganglionic Sympathectomy

In 1852, Claude Bernard described increased blood flow following sympathetic denervation and ten years later Raynaud's classical description of local asphyxia and symmetrical gangrene emphasized some of the effects of vasoconstriction or vasodilatation in functional disorders of the nervous mechanism of blood vessels. The often disabling role of associated vasospasm in organic diseases of arteries was not generally appreciated until many years later. Diez, in 1924, performed the first lumbar ganglionectomy for thrombo-angiitis obliterans, and Robertson, in 1932, was among the first to report beneficial results following sympathectomy in advanced arteriosclerosis obliterans. In the past fifteen years, many reports have proven the value of sympathectomy in obliterative as well as vasospastic diseases. The indications for sympathectomy have been broadened as regards both age of the patient and severity and nature of the disease.

The three principle effects of sympathectomy are,—(1) reduction of vasoconstriction, (2) influence of pain associated with reduced arterial circulation, and (3) elimination of sweating.[2] The results in a given case often cannot be predicted on the basis of pre-operative tests, especially in organic disease. In a five year study of a consecutive series of 95 patients having had sympathectomy, we have attempted to evaluate the role of preliminary tests, the early and late results of the operation and to determine the cause of poor results. All but 4 of these patients have been veterans, admitted to the Thayer V. A. Hospital. These four were private patients (J.A.K.) with Raynaud's disease and are included in the study for sake of completeness. The type of lesions and number of patients in each group having had sympathectomy are listed in Table 1.

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Table 1

Peripheral Vascular Disorders

	Number of Patients	*Sympathectomies*	
		Cervico-dorsal	*Lumbar*
Raynaud's disease	4	7	
Hyperhidrosis	2		4
Vasospastic disorders	41		48
Thrombo-angiitis obliterans	16	1	28
Arteriosclerosis obliterans	28		41
Arterial thrombosis and emboli	4		4
Total	95	8	125

A. *Raynaud's Disease.* This condition usually involves both upper extremities in young women who are asthenic and emotionally unstable. However, in this series two of the four were males. One of them had associated scleroderma. The results in the two women and one man have been excellent. The patients having scleroderma was so recently operated upon that the interval is too short for evaluation. A preganglionic sympathectomy, as advocated by Smithwick,[3] was done in each case. Sympathetic denervation of the upper extremity is not as permanent or as satisfactory as in the lower extremity.

B. *Hyperhidrosis.* Primary sympathicotonia or idiopathic hyperhidrosis is rare, however, abnormal sweating was a major complaint in 23 of 41 patients listed in the post-traumatic vasospastic reflex group. Sweating is completely and permanently interrupted by sympathectomy. This factor is beneficial in many disorders other than hyperhidrosis. Sweating, for example, serves to increase heat loss by evaporation and thus cools the extremity and increases the need for blood flow. Sweating also promotes maceration of skin and aggravates epidermophytosis, conditions which may initiate infectious processes, ulceration or gangrene.

Only two patients had idiopathic hyperhidrosis. In one sweating was the only complaint, relief being complete after operation; in the other, it was associated with chronic ulceration, and sympathectomy together with skin grafting resulted in a cure. In the group of 23 patients in which sweating was the major complaint, satisfactory relief was noted in all cases following operation.

C. *Post-traumatic Vasospasm.* In the past few years increased attention has been paid to vasomotor disturbances following physical or thermal trauma to the extremities.[4, 5, 6, 7] Vasospasm is characterized by pain, cold sensitivity, rubocyanosis, coolness, sweating and diminished or absent pulsations. One or more of these signs may be present and are especially likely to follow repeated trauma. Gangrene of the involved extremity may result and, in young men, thrombo-angiitis obliterans may be difficult of differentiation. In this group of 41 patients with vasospastic reflex disturbances, pain, cyanosis and cold were the most frequent symptoms. Causalgia was present in six.

Six patients with a past history of frost-bite presented symptoms of mild to severe burning pain, sweating, coolness and mottling of the feet. All noted marked improvement following sympathectomy (three had bilateral sympathectomy). Recently two other patients have had sympathectomy very soon after "immersion-frost-bite" injury and it is believed that early operation was of definite benefit. Shumacker[8] recently showed the value of early sympathectomy in frost-bite.

Sympathectomy was used as an auxiliary procedure in 11 patients presenting the post-phlebitic syndrome and in three with chronic leg ulcers. In the entire vasospastic group, 36 of 41 patients (88 per cent) followed from eight months to five years, obtained satisfactory results following sympathectomy. Adequate denervation was accomplished in 95 per cent of the group, giving only 7 per cent unsatisfactory results.

D. *Thrombo-Angiitis Obliterans.* Twelve patients with this disease have had bilateral lumbar sympathectomy; one of them also had a cervico-dorsal sympathectomy. An additional four patients have had unilateral lumbar sympathectomy. Their ages ranged from 23 to 43 years and symptoms included claudication, color and temperature changes, rest-pain, edema, ulceration and recurrent phlebitis. Fourteen of the 16 patients (86.5 per cent) had a satisfactory result, 11 of them being gainfully employed at present. One of the "unsatisfactory" patients ultimately had bilateral amputations below the knee and the other has had less exercise tolerance. The latter patient, however, has gone over two and one-half years without ulceration or gangrene. These patients have been urged to stop smoking since nicotine seems definitely detrimental.

E. *Arteriosclerosis Obliterans.* In the past fifteen years it has been recognized increasingly that despite involvement of the major vessels by obliterative disease, sympathectomy favors the development of collateral circulation in the smaller, less involved vessels.

While certain studies are indicated prior to operation, their results may or may not predict the full effect of sympathectomy. The absence of a significant rise of skin temperature after a paravertebral block or spinal anesthesia does not take into account the more gradual development of collateral circulation over a period of months. Experience has shown that a poor response in skin temperature studies is not a true contraindication to sympathectomy, although the result may be more doubtful in such cases. Of eight patients who had a significant preoperative skin temperature response, there were seven who were later classified as having a satisfactory result after sympathectomy. Twelve of 15 patients (80 per cent) who had little or no pre-operative response were classed as satisfactory after operation.

Twenty-eight patients, ages 46 to 73, had lumbar sympathectomy for arteriosclerosis obliterans. They have all been followed from six months to five years. Thirteen had bilateral procedures, usually done at one operation. Eight of the 28 were diabetics. Six presented some degree of gangrene on admission.

In 23 (82 per cent) of the group the results have been classified as satisfactory. This was based on increased tolerance to measured gait and distance, relief of pain during activity or at rest, improvement of ulceration and failure to develop further ulceration or gangrene. Only one patient developed further ulceration after operation, requiring toe amputations. Five patients had amputations below the knee later, all having had pre-operative gangrene and were not deemed suitable for transmetatarsal amputation. There were no instances of so-called paradoxical gangrene after sympathectomy. There have been two deaths in the group thus far, neither attributable to the operation, one patient dying of gastric carcinoma, the other, following a cerebral accident six months later.

The criteria for the selection of patients have been broadened during this five year period. The general condition of the patient, cardiac and renal function studies and the severity of peripheral changes must all be weighed against operative risk and possible benefit from sympathectomy.

The following contraindications to sympathectomy in the arteriosclerotic group have been observed: (1) severe cardiac, cerebral and or renal involvement; (2) deep gangrene proximal to toes; (3) constant intractable rest-pain not relieved by paraspinal or peripheral nerve block; (4) rapid and progressive thrombosis of major arteries; (5) marked atrophy of skin and subcutaneous tissue of foot and leg with rubor of foot.

The observation of a satisfactory result in 82 per cent plus the absence of an operative mortality present convincing evidence of the value of sympathectomy in this arteriosclerotic group. More accurate criteria would undoubtedly decrease the number of unsatisfactory results, but at present we can accept these to secure good results in a large number of patients.

F. *Arterial Thrombosis or Embolus.* Similar to the problem of the chronic obliterative diseases is that of the sudden loss of patency of a major artery through thrombosis, embolism, injury or surgical division. In each of these entities, sympathectomy may play the same role of insuring maximal effectiveness of the collateral arterial channels.

Two cases of arterial thrombosis were in this group and unfortunately the response to sympathectomy in each was poor. In one the disorder finally resulted in bilateral amputation and in the other it was progressive, leading to the patient's death.

Two patients with femoral artery emboli had a sympathectomy as adjunctive treatment. In one, it is believed to have played an important role in preservation of the extremity. In the other, ultimate gangrene of the anterior compartment necessitated a low thigh amputation.

G. *Preparation for Elective Surgery for Aneurysm.* The efficacy of sympathectomy in cases of acute arterial division or trauma, or elective surgery for aneurysm or arteriovenous fistula varies with the duration of the disorder, the extent of the collateral channels, and the capacity of the collateral bed to undergo vasodilation. Preganglionic sympathectomy has a very definite role in acute or early lesions and in preparation for aneurysmorrhaphy. Sympathectomy is rarely needed in the presence of an arteriovenous fistula because of the increased collateral circulation that develops in a few weeks.

2. Thrombo-Endarterectomy

This procedure consists of resection of the thrombus, intima and diseased portion of the media of obstructed arteriosclerotic arteries. The defect in the remaining viable wall is then closed. Restoration of blood flow, with or without anticoagulant therapy, has been reported in patients who exhibit segmental thrombosis. The operation was first described in 1947 by dos Santos, has been frequently performed in France, and recently has been reported in this country.[12,13]

A pathological cleavage plane is formed within the media by the accumulation of cholesterol and fatty acid salts beneath the intima. The outer coat is usually not involved. Segments up to 48 centimeters in length have been removed without subsequent thrombosis. The success of the procedure depends upon patency of the artery distal to the obstruction.

Our experience in one successful case is reported later in this discussion. Angiograms are essential in the selection of suitable cases.

3. Arteriectomy

In 1917, Leriche suggested that an obliterated segment of an artery may cause vasoconstriction of the extremity through its stimulator effect on the sympathetic nerve endings in the artery. He and others have noted regression of trophic changes and functional improvement in an extremity following excision of obstructed segments. This resection removes, (1) those fibers derived from ganglionic trunks, (2) those accompanying somatic nerves which are supplied to arteries at different levels, and (3) the intramural neurone complex.[9] The latter can cause some vasoconstriction even after ganglionectomy and periarterial sympathectomy.

Arteriography is valuable in the selection of suitable patients for this procedure. Shnayerson[9] recently reported on arteriectomy in 14 patients with good results in twelve. He feels that obliteration of the smaller vessels of the leg or foot and arteriographic evidence of poor collateral around the obstructed segment are contraindications to the procedure. He found a significant rise in skin temperature after arteriectomy as well as amelioration of claudication and improvement in trophic changes and ulceration.

The following case reveals some of the limitations of femoral arteriograms and the value of combining different surgical procedures in certain obstructed lesions.

D. V. A. (VUH No. 208,181), 38 year old white man, was admitted February 21, 1952, with the history of dull, aching pain in the left leg 3 months prior to admission. This progressed to definite claudication on walking one block or climbing two flights of stairs. He smoked about one package of cigarettes daily. There was no history of trauma or thrombophlebitis.

Examination was within normal limits except for the left lower extremity. The left foot and toes were cooler than the right and posterior tibial and dorsalis pedis pulses were faint or absent. The left popliteal was greatly diminished but the femorals seemed equal. Oscillometric index was 0.5-to-1 below the left knee, and 8.5 below the right. A high left femoral arteriogram revealed a complete block proximal to the origin of the profunda femoris (Fig. 1).

At operation, a left lumbar extraperitoneal preganglionic sympathectomy was carried out. There were three small atheromatous plaques, not over 3 mm. in diameter, on the posterior wall of the

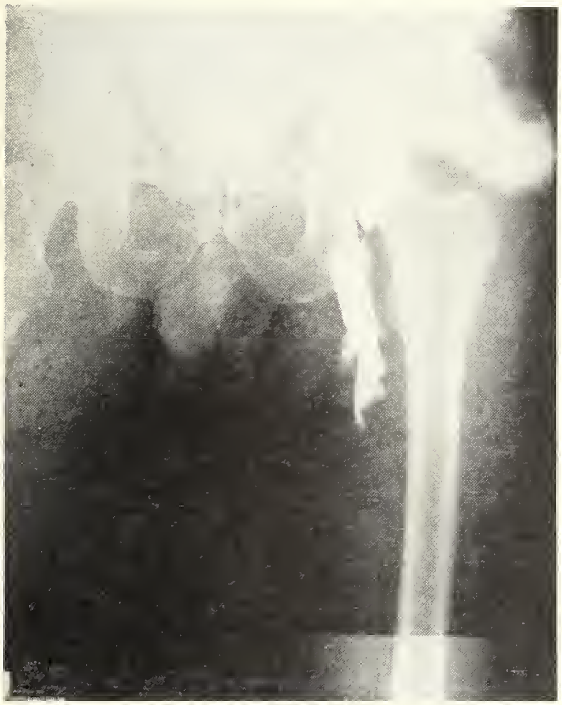

FIG. 1

left common iliac artery. The left femoral artery was then exposed and found to contain a thrombus which extended into the common femoral proximally, and involved the superficial femoral throughout an 18 cm. incision. There was marked thickening at the site of the profunda femoris and pulsations were felt about 2 cm. proximal to the profunda. The superficial femoral was then incised and a thrombo-endarterectomy was carried out until a free lumen was encountered proximally. The superficial femoral was thrombosed distally for an undetermined distance and it was felt that blood kow could probably not be restored in this vessel without undue interference with collaterals. The incision in the common femoral was closed with 5-0 arterial silk and the superficial femoral artery was excised distal to the profunda. Blood then flowed into the profunda and full pulsations were noted in this artery for the first time.

There was marked objective and subjective improvement following these procedures. The posterior tibial pulse was noticeably stronger and the extremity was quite warm. Microscopic sections of the artery showed inflammatory changes characteristic of thrombo-angiitis obliterans.

Comment: It was felt that combined sympathectomy, thrombo-endarterectomy and arteriectomy were all of benefit to this patient. Though the arteriogram revealed the site of blockage, no collaterals were seen and the distal extent of thrombosis could not be determined. The arteriogram was repeated at the time of operation with the contrast media being injected into the common iliac artery, but still no patent vessels distal to the thrombus could be demonstrated.

4. Trans-metatarsal Amputation

The advent of antibiotics has afforded more latitude in the management of necrosis and infection in the extremities of patients with even advanced arterial disease often complicated by diabetes. It is possible in many instances to amputate one or more toes with healing after infection has been controlled.

McKittrick[10] and recently Warren et al.,[11] have reported healing in 82 per cent and 62.8 per cent of groups of patients having had trans-metatarsal amputation for moderate to marked arterial disease. In the latter group there were no pulses felt distal to the femoral, and there was ischemic rubor on dependency and rest pain which did not respond to therapy. Even in this group Warren reported 20 per cent healing. Strict adherence to the principles proposed by McKittrick should make this a valuable procedure in selected cases.

5. Embolectomy

(This procedure was discussed elsewhere in this symposium, page 347.)

6. Other Procedures Advocated for Peripheral Arterial Disorders

Periarterial sympathectomy, venous ligation and the creation of femoral arteriovenous anastomosis have rarely been successful. Recent studies by Szilagi, Jay and Munner[1] indicate that attempts to shunt arterial blood into distal venous channels are not effective beyond the popliteal space and may be definitely harmful. Shunted blood is returned to the heart via collateral veins close to the site of the anastomosis rather than proceeding to the distal extremity. Any increase in the pressure within the venules and capillaries results in diffuse interstitial hemorrhage, edema and tissue destruction. Already critical limbs are only further deprived of blood supply which would be available through collateral channels.

Summary

1. Tests of value in estimating severity of organic arterial diseases and worth-while

procedures for their alteration have been reviewed.

2. In a five year study of a consecutive series of 95 patients having had sympathectomy, without an operative mortality, early and late results have been evaluated.

3. Definite contraindications for sympathectomy in the arteriosclerotic group have been observed.

4. A case report is presented revealing some limitations of femoral arteriograms and the value of combining different surgical procedures for a single problem of arterial obstruction.

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Significance of Pulmonary Hypertension in Constrictive Pericarditis, J. G. Scannell, G. S. Myers, and A. L. Driedlick, Surgery 32:184, 1952.

In this paper the authors present evidence to support the concept that both the right and left side of the heart are similarly affected in constrictive pericarditis and that inflow stasis results from interference with proper ventricular filling rather than constriction of the right atrium and orifices of the superior and inferior vena cavae. They stress the need for the adequate liberation of both ventricles in order to relieve the pulmonary hypertension which is present in constrictive pericarditis in addition to elevated peripheral venous pressure. The authors agree with Burwell who, after performing cardiac catheterization studies on four patients with constrictive pericarditis, concluded that such patients have pulmonary congestion of similar degree to that present in the peripheral venous circulation and that, in general, pressures in the superior and inferior vena cavae and right atrium are equal. Therefore, Burwell and the writers agree that there is no need to decorticate the right atrium and cavae; this opinion differs from that of Holman who has stressed the importance of decorticating the right atrium and cavae as well as both of the ventricles.

Five patients with constrictive pericarditis who were treated by decortication of the ventricles are presented together with the preoperative and postoperative cardiac catheterization studies. Common factors in the preoperative catheterization studies were significant pulmonary hypertension and marked, though nearly equal, elevation of pressures in the cavae and right atrium. Four of the patients had an excellent clinical response after operation and in these the postoperative catheterization studies revealed normal or near normal pulmonary and peripheral venous pressures. The fifth patient continued to have pulmonary hypertension and eventually expired. Postmortem examination showed that considerable constricting scar was present over the posterolateral half of the left ventricle so that adequate liberation of that chamber had not been achieved. In none of these patients was any effort made at the time of operation to decorticate the right atrium and the vena cavae.

The authors conclude that pulmonary hypertension is a constant and important finding in constrictive pericarditis and that it may be completely relieved by adequate decortication of the left ventricle. Decortication of the right ventricle relieves the elevated peripheral venous pressure and they feel that no attention need be paid to the right atrium, vena cavae or pulmonary veins at the time of operation. (Abstracted for the Middle Tennessee Heart Association by Walter Dively, M.D., Nashville.)

STAFF CONFERENCE

Vanderbilt University Hospital*

A Few Intraoperative Complications of Hysterectomies

DR. BURCH: This is not a Vanderbilt University Hospital case, but was treated by a member of our staff at another institution. The case represents certain problems concerning the intra-operative complications of hysterectomy which are worthy of discussion. The case will be presented by Dr. Robert Chalfant.

DR. CHALFANT: A 39 year old white female para III, gravida III, was first admitted to the hospital October 17. Her complaint was the passage of urine per vagina for 4 months. Four months before she had a total hysterectomy in another center for fibroids associated with menometrorrhagia. The passage of urine through the vagina had begun during the postopérative period. (Her story was rather sketchy as to what had occurred.) Apart from this complaint, she had had no other symptoms of any disability and her general health had always been good. Her menarche was at 12 years of age, periods occurring regularly every 28 to 30 days and lasting 4 to 5 days with a moderate amount of flow, no dysmenorrhia and no discharge. She denied venereal disease. At the age of 33 years, following her last child's birth, she began having increased menorrhagia which ended in metrorrhagia for 9 months prior to the operation at the age of 39. Her obstetrical history revealed three full-term normal infants each of whom delivered spontaneously. The youngest child being 6 years of age.

Physical examination and functional inquiry were non-contributory apart from pelvic examination. Abdominal examination revealed a well healed right paramedian incision. There were no masses or tenderness in the abdomen nor on pelvic examination, there was a normal external genitalia with a parous introitus, a well supported anterior and posterior vaginal wall without relaxation. There was no demonstrable stress incontinence. On bimanual examination a dimple could be felt slightly to the right side of the vault of the vagina with considerable scar tissue reaction about it. The remainder of the vault was freely mobile. There were no thickening or masses and the adnexa were clear. Ovaries and tubes could not be palpated. On visualization of the vaginal canal high in the vault on the right anterior wall of the vagina was a small slit-like opening measuring approximately 0.25 cm. in length from which could be seen no leakage of urine. A small probe was passed through this opening, and it passed readily upward and forward in the direction of the bladder. The examination confirmed an opening in the vaginal mucosa, but no definite location could be identified.

Her previous operative report was secured and in the operative note of her family physician it was noted that she had a multiple *leiomyomata uteri* for which a total hysterectomy was performed. Her hemoglobin on admission at that time had been 8 Gm. She was having almost continual vaginal bleeding and prior to the abdominal hysterectomy a D & C was carried out to rule out possibility of malignancy. The cervix had been clean. She had been given whole blood preoperatively and at the time of surgery her hemoglobin was 11 Gm. During the operation, the course of the right ureter was distorted due to an interligamentous fibroid in the broad ligament. In addition, in the angle of the vault of the vagina considerable bleeding had been encountered which had required packing and multiple ligatures at the time. The vault of the vagina was closed from above. The haemostasis was secured and the area was reperitonealized at the close of the operation.

A satisfactory immediate operative result was obtained. On the patient's tenth postoperative day she had a brisk hemorrhage from the vagina which was immediately packed, but the bleeding continued. The patient was returned to the operating room and under direct visualization a bleeder could be seen in the right side of the vaginal cuff and a mattress suture was inserted in the vaginal cuff. This contained the bleeding and the remainder of the postoperative course was uneventful. Following her return home, she had the normal amount of vaginal discharge which did not clear. At her six week postoperative check there was some watery vaginal discharge. A diagnosis of a fistula formation between either urethra, ureter or bladder and the upper portion of the vagina was made. Her family physician contacted the staff of this hospital and a plan of therapy was outlined. A period of at least 4 months observation was allowed for reaction to subside. During this time she was placed on Gantrisin and ammonium chloride to maintain an aseptic and acid urine.

She was readmitted to the hospital for repair of the fistula. By inserting a foley catheter and instilling 250 cc. of urine in the bladder, one could not adequately demonstrate a flow of urine through the vaginal opening. On adding methylene blue and increasing the bladder capacity to 400 cc. the colored urine could be seen to pass through the tract into the vaginal canal. In order to rule out any other abnormalities of the genito-urinary system an IV pyelography was done. This revealed normally functioning kidneys and normal courses of the ureters into the bladder. Under direct cystoscopy a fine urethral catheter was inserted into the bladder and passed through this opening down into the vaginal canal. This clearly identified it as a single vesiscovaginal fistula.

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Operative repair of the fistula was carried out on October 22. There was continuous drainage through the catheter for a period of 4 days postoperatively. She was placed on urinary antibiotics and had an uncomplicated postoperative course. She was ambulatory immediately postoperatively. On discharge on the 12th postoperative day, the vaginal vault was completely dry; there was no evidence of leakage of urine into the vaginal orifice and there was no residual urine in the bladder. She has been followed closely in postoperative clinic and now 6 months postoperatively she has a satisfactory cure.

DR. BURCH: Thank you, Dr. Chalfant This case is presented to introduce the subject of intra-operative complications associated with hysterectomy by either the abdominal or the vaginal route. Three problems are met occasionally in doing a hysterectomy: hemorrhage, ureteral damage and bladder lacerations. This case illustrates several complications that can occur during hysterectomy.

DR. H. ROGERS: What is the commonest intra-operative complication?

DR. C. WILLIAMS: Hemorrhage is usually considered the most common and the most important. It is usually unforeseen, annoying and can at times be terrifying.

DR. J. BATES: Would you feel that all operative cases should be cross-matched and typed preoperatively.

DR. W. McGANITY: As a general rule, the answer is no. But for any major abdominal or vaginal procedure, the patient should be crossed and typed preoperatively and blood should be available in the room during the operative procedure. An intravenous infusion should be running and blood should be used as indicated.

DR. H. MORGAN: When should the blood be started?

DR. McGANITY: That depends on several factors. First of all, the patient's previous condition. Obviously the patient, who has come into the hospital in shock, will have blood started before coming to the operating room. But if you have a patient who is in good condition with an adequate hemoglobin, there is no need to use blood routinely during a major operation. The use of blood should be limited to definite indications during the intra-operative period. Uncontrollable hemorrhage is an indication, as is the gradual loss of blood from generally oozing surfaces producing a lowering of blood pressure and gradual decline in the general condition. Otherwise the routine use of blood just because it is available is wasteful, unnecessary, and has a certain risk to the patient due to incompatible blood reactions.

DR. M. VELLER: What are the commonest causes of intra-operative hemorrhage?

DR. E. WILLIAMS: In simple abdominal and vaginal hysterectomies most of the hemorrhage results from technical errors in the making of pedicles and tying of ligatures—ties break and clamps slip. Good clamps, adequate pedicles and suture material are essential. A bite that includes between one-half and two-thirds of the average size Kocher is a reasonable bite to be included in one mass ligature.

DR. G. CRAFTON: What should one do when a clamp does slip?

DR. E. WILLIAMS: Usually there has been enough crushing by the clamp to control the hemorrhage momentarily and the proper procedure is to grasp the slipped tissue side to side in a series of straight Kochers or Allis clamps. These can then be tied off with a series of interlocking ligatures.

DR. M. VELLER: Where does major hemorrhage in the pelvis arise?

DR. BURCH: It comes from two places. First, and probably most commonly, it comes from the uterine artery. But even this catastrophe is minor in comparison to the really great hemorrhages that can occur from accidental injury to the vessels of the side wall of the pelvis. In both cases, it is most important to make an attempt to control the bleeding by ordinary principles of packing. There is no place for the wild stabbing with forceps into a puddle of blood. It is in this type of procedure that many ureters are crushed, damaged and ligated. After a few minutes, one can remove the pack. Sometimes the hemorrhage will have ceased or slowed down so that the bleeding vessel can be seen and be ligated.

If not, two courses are open. One is to proceed with the operation, if the pack is controlling the situation, leaving the pack in place and deferring any further attempt to dry up the wound until the uterus has been removed. If, on the other hand, the pack does not control the situation, every emergency procedure is in order. The anesthetist can elevate the pelvis to a full Trendelenberg; and then transfuse blood into an arm vein and into a leg on the opposite side of the bleeding vessel. One can temporarily occlude the common iliac arteries and the superior hemorrhoidal vessels. The latter can usually be identified and a rubber intestinal clamp placed along the mesentery of the rectum. To occlude the common iliac vessels, open the posterior parietal peritoneum, dissect the artery off the vein and pass a Penrose drain under the artery and then by simply crossing the ends and exerting traction this vessel can be occluded. This can be maintained by a forcep on the drain. Once this is done, the patient's general condition will immediately improve. Occlusion can be maintained on the same principle as in applying a tourniquet to an extremity,—on for twenty minutes with release for periods of one to two minutes. This is done in order to not completely devitalize the tissues. With the blood supply thus occluded we can find the bleeding source and either by ligature or gelfoam pack deal with the situation.

DR. CHALFANT: Which of the genito-urinary injuries is the most common?

DR. C. WILLIAMS: Bladder injuries are more common than the urethral injuries. Bladder injuries themselves can occur at any time during the operative or even the post-operative periods, as this case will illustrate. There are four stages in the procedure where bladder injuries are most likely to occur. The first is on opening of the lower part of the peritoneum. If there is any upward displacement of the bladder by tumors, adhesions or pregnancy (as a Cesarean section) the hazard of opening the bladder is increased. For this reason it is important that all patients should be catheterized immediately pre-operatively or that an indwelling urethral catheter be in place during every abdominal hysterectomy. The second stage occurs during the incision of the vesico-cervical peritoneum. Usually this area is opened with ease, but occasionally it can be distorted by attachments to tumors or obliterated by adhesions. In such instances it is easy to injure the bladder and at times is unavoidable. The third type of bladder trauma occurs in separating the dense adhesions between bladder and tumors of uterus or ovary. Here and in the previous two, if the laceration is high on the bladder away from its base, exposure is adequate and simple repair can be undertaken at the time. The most important thing is to recognize that the bladder has been entered. If the laceration is toward the base of the bladder or, as in the fourth type in the dissection of the vesicovaginal septum, the exposure problem is more troublesome. It is just as important to recognize and close the bladder lacerations in the vaginal route as it is in the abdominal route. The immediate closure is simple and the results are excellent. A two or three layer closure with continuous drainage of the bladder and a urinary antiseptic in the postoperative period permits almost all bladder lacerations to heal by primary intention.

DR. K. McGILL: How can we prevent bladder injury?

DR. McGANITY: There are three principles in performing vaginal or abdominal hysterectomies that can help prevent these occurrences. First of all, prevention of blood loss and the maintenance of a dry operative field. Secondly, adequate visualization of the area in which you are working, in which you are putting your clamps, in which you are tying your ligatures. Thirdly, adequate mobilization of the bladder. We have no difficulty in treating lacerations that are seen and recognized at the time of the operation. The ones that lead to the difficulty and produce vesicovaginal fistulas are those not recognized and present themselves later in this case.

DR. CRAFTON: What are the principles in the repair of genito-urinary fistulae?

DR. C. WILLIAMS: First and probably most important is to avoid too early operative interference. At least four months should elapse after the injury before any operative approach should be entertained. We must thoroughly recognize the cause of the fistula and whether there has been any previous attempts at repair. We should carefully determine whether there are multiple or single fistulas and their situation.

In the actual repair, we must have adequate exposure. We must excise all of the scar tissue. We must avoid tension of the bladder and we must prevent the accumulation of blood between the bladder and vaginal mucosa. In the postoperative period we must maintain a urine that is acid and aseptic by the use of ammonium chloride, Gantrisin or antibiotics.

DR. MORGAN: What are the risks and how can we avoid traumatic injury to the ureters?

DR. CHALFANT: In doing an abdominal hysterectomy there are several sites in its course in the pelvis where there is risk of ligating, crushing or cutting the ureter. The first is in the region of the infundibulopelvic ligament and the ovarian vessels as the ureter comes over the brim of the pelvis; secondly, along the posterior aspect of the broad ligament; and thirdly, after the ureter has crossed in front of the uterine artery on its way to the bladder in the parametrial region. There are again a few principles that can be helpful. Palpation of the ureter as it crosses the pelvic brim is always possible and the course can be palpated throughout the whole length down to its insertion into the bladder. Here again it is important that we have a dry operative field. And the third helpful item is adequate mobilization of the bladder, especially in the angles about the cardinal ligaments. If the anatomy is distorted by adhesions or tumors, the added time in dissection and visualization of the whole course of the urethra is worthwhile.

DR. STEPHENSON: What should one do when a ureter is cut?

DR. BURCH: When a ureter is cut, three procedures are available,—first, ligation of the proximal end, secondly, anastomosis, and thirdly, reimplantation. Double ligation of the proximal end of the ureter produces hydronephrosis and subsequent pressure atrophy in the cortex. It is an old and satisfactory procedure in more than 50 per cent of the cases where a kidney can be sacrificed. Nowdays ligation is not recommended unless the condition of the patient is so critical that it would seem unwise to use the time consuming procedure as the other two are. Of these other two, suturing is the most satisfactory. Its technique is simple,—a small rubber T-tube is introduced through a small incision in the ureter above the line of anastomosis through a separate stab wound in the abdomen. If such a tube is not at hand, a ureteral catheter can be passed up into the pelvis and down into the bladder. A few fine, catgut sutures will hold the two ends of the ureter together and drainage is provided through the flank by a separate stab wound. The catheter must be fixed in the ureter, otherwise peristalsis will pass it down below the level of the anastomosis in a short time. It can be securely fixed with the foley catheter in bladder so that peristalsis will not disturb the line of anastomosis. If the ureter is severed in the lower third, it can sometimes be implanted into the bladder itself while ligating the distal end. As to whether this or an anastomosis is done is primarily one of the degree of mobilization of the proximal end of the ureter. The proximal end of the ureter is split upwards in a longitudinal axis for about a half an inch and a ureteral catheter inserted in the ureter and passed into the kidney pelvis. A stab wound is opened in the bladder and a suture with a needle in the bladder and a suture with a needle in both ends catches each of the uretheral halves. These sutures then passed through the bladder are brought out approximately three-fourths of an inch to the side of the stab wound. The tying of these sutures will then pull the ureter into the bladder and open up the divided end in a butterfly fashion. A few stay sutures between the ureter and the bladder completes the anastomosis. Suprapubic drainage through the space of Retzius completes the drainage of the bladder and the lower end of the uretheral catheter emerges along side the bladder catheter and is tied to it.

DR. MORGAN: Is the only risk of ureteral injury due to actual severing or ligating of the ureter?

DR. McGANITY: No, and nowdays probably one of the commonest causes of ureteral injury is in the radical operation for uterine and cervical malignancy. In these procedures the whole course of the ureter from the pelvic brim to the incision of the bladder is dissected free and at the close of the operation, the ureters run across the pelvis like wires across a chasm. They are intact and there is no visible evidence of injury, yet in a number of cases a fistula has developed from five to thirteen days postoperatively.

DR. CRAFTON: What factors cause this distressing situation?

DR. BURCH: The main factor is blood supply. The blood supply of the lower portion of the ureter passes along in the areolar tissue. Some of the blood supply comes from the arteries and veins descending from the kidneys and anastomosing with another group that ascends the bladder. At various points smaller vessels are given off and join this para-ureteral network. These arise from the iliac, the hypogastric, uterine, and the middle hemorrhoidal vessels. The sum total of blood carried through these small accessory arterial vessels make up a goodly portion of the blood supply of the pelvic ureter. We know that in doing radical surgery we cannot avoid impairing the nervous control of the bladder. With this comes a urinary retention. In spite of all our precautions with antibiotics, the bladder residual does become infected producing a subsequent stasis in the ureters so that continuous decompression of the bladder is absolutely essential until bladder tone returns in five to six weeks postoperatively. This is done by means of an indwelling catheter. The combination of ascending infection, devitalizing blood supply in the pelvic ureter itself and the fact that its course normally would lie in a raw, open and potentially infected area, all contribute to the distressing situation of having ureters slough from five to thirteen days postoperatively.

DR. H. ROGERS: Is there anything we can do to alleviate this condition?

DR. BURCH: Yes, continuous bladder drainage helps. Secondly, the ureters as a rule do not need to be stripped clean; some of the loose areolar tissue which carries the blood supply can be preserved. Thirdly and possibly most important, it is possible to envelop the denuded ureters with a peritoneal sheath. In this manner if a slough does develop, it can be plugged by the peritoneum and the ureter can regenerate a new channel. We know that the ureter has great ability to regenerate as long as it is splinted by a catheter. In using a peritoneal envelopment we are using the same physiological principle. Our experience to date certainly indicates that the employment of these measures has greatly lowered the incidence of ureteral fistula following radical surgical procedures.

In summing up, there are three major abdominal intra-operative complications which can be of serious immediate or residual significance in the performance of a total hysterectomy,—they are hemorrhage, bladder injuries, and ureteral damage. The general principles that should be employed to avoid these distressing complications have been outlined: a dry field, adequate exposure, identification of structures and proper mobilization of the bladder.

The President's Page

MEDICINE AND MANPOWEER IN TODAY'S INDUSTRIES

Dr. Smith

Note: Doctor Jean S. Felton of Oak Ridge, Chairman of the T.S.M.A.'s Committee on Industrial Health, kindly agreed to be guest columnist and discuss a topic vital to organized medicine today. His message follows:

"With military preparedness still on the ascent both here and in those areas arms-supported by the United States, American industry is being called upon to convert its manufacture from marketable to martial goods.

"Manning these plants and factories has not been easily accomplished because of the current full employment, and the demands of the Selective Service System. Those physicians engaged in the specialty of industrial medicine long have been accustomed to the conducting of pre-placement physical examinations prior to the hiring of a prospective worker. They have recognized that the physically impaired, the emotionally marginal, the aged, and the woman worker can, and have turned in challenging production records—when their physical capacities have been matched with the physical demands of the job.

"It is not only the Industrial Physician, however, who approved an individual for employment. The American Academy of General Practice reported in May, 1950, that 95 per cent of its membership cared for industrial cases, and that, in one year, 234 industrial cases per member were seen on an average. The examiner whose office is not immediately at the plantsite may have a dimmed perspective of the work capabilities of the disabled and the aged. He may be inclined to misinterpret a physical disability for a job disability, and reject an applicant for work whose contribution might not be equalled by the specimen of physical perfection who is not comparably motivated.

"America's medical practitioners can aid the production effort through a better understanding of job requirements, and through an appreciation of the two greatest untapped sources of manpower: the 11,000-000 persons over the age of 65, and the 20,000,000 moderately handicapped. Besides these, there are nearly 2,000,000 persons with severe static disabilities who could render effective service in industry with modern rehabilitation training, and skilled job replacement *if approved by medical and administrative managements.*

"As it has been reported, 'The prejudices and misunderstandings which have deprived us of able employees are luxuries we can no longer afford.' Through a cooperative program among team members—the family physician, the industrial physician, the rehabilitation specialist, and the employment interviewer—our manpower needs can be met.

"What are the goals?

"The recognition of the worth of the physically limited person who is capable of productive employment.

"The practicable and desirable rehabilitation of the chronically impaired to a wage-earning status.

"The retention of the physically and emotionally fit aged worker in industry.

"The utilization of the woman worker in industry as a realistic view of distaff strength.

"How can these goals be attained?

"By a cross-fertilization of ideas between the physician in industry and the general practitioner and specialist outside industry.

"Through better communication, and with an increased understanding among practitioners of each other's goals, the employee-patient will better be able to pull his load in the nation's defense during the tremendous days of this, our Atomic Age."

Daugh W. Smith

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SEPTEMBER, 1952

EDITORIAL

ATABUSE IN THE MANAGEMENT OF THE ALCOHOLIC

Within recent months two instances have come to your editor's attention in which Antabuse had been prescribed apparently without proper attention to details. The severe reaction in one prompted some study on the matter.*

It appears that Antabuse, the trade name for tetra-ethylthiuram disulfide, has been used in the Scandinavian counties for several years as an adjunct to the use of psychotherapy in the handling of the chronic alcoholic. The drug does not affect the rate of elimination of alcohol from the body, but by its effect on enzyme systems of the liver it interferes with the usual metabolic utilization of alcohol. In those receiving Antabuse, the acetaldehyde content of the blood after the ingestion of alcohol is much higher than in persons taking the same amount of alcohol without the drug. Furthermore, the symptoms of reaction are related to the level of acetaldehyde.

Since the drug is slowly absorbed from the intestine it must be taken some 12 to 24 hours before a test-dose of alcohol. The drug is so slowly excreted that even some days after a single dose, unpleasant symptoms may follow the ingestion of alcohol. The symptoms usually appear within 5 to 15 minutes in the drug-prepared person, after the taking of alcohol. A blood alcohol level of about 50 mg. per cent will give the full picture of reaction. Unconsciousness may be anticipated if the alcohol level is of 125 to 150 mg. per cent. The reaction may last for hours dependent upon the amount of alcohol in the blood.

If the person is under 50 years of age, and has no myocardial or coronary disease, the dosage may be established by use of a test dose of alcohol. After a brief period of treatment alcohol is administered to produce symptoms of reaction. Investigators at Baylor University School of Medicine studied a group of patients for reactions on the following schedule.† After careful physical examination, including an electrocardiogram, the patient was given 1 gram of Antabuse daily. On the fourth day he was given an ounce of 95 per cent ethyl alcohol in four ounces of water, orally. If the reaction was mild this dosage was continued, if more severe or severe the dose of Antabuse was reduced proportionately.

The symptoms of reaction are flushing, fullness and throbbing in the head, sweating, difficulty in breathing, palpitation, tachycardia, nausea and vomiting. Drowsiness supervenes followed by sleep. Hypotension develops, the blood pressure dropping to levels of 60/30. Electrocardiographic changes if present consisted of reversible T wave and ST segment alterations.

It can readily be seen that there are inherent dangers in the use of Antabuse in older patients as well as in those with myocardial disease. Hypotension in such instances may be serious. Furthermore, if the patient is not thoroughly indoctrinated in the dangers of drinking excessively while on the drug therapy he may experience serious reactions,—the degree of reaction, as indicated, being dependent upon the level of blood alcohol.

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*Report of the Council on Pharmacy and Chemistry. Antabuse in the Treatment of Alcoholism, J.A.M.A., 149:275, 1952.

†Smith, J. A., Dardin, P. J., and Brown, W. T.: The Out-Patient Treatment of Chronic Alcoholism with Antabuse, with an Evaluation of the Cardiovascular Complications Occurring During the Alcohol-Antabuse Reaction, Am. Prac., 3:525, 1952.

The physician must guard against the misconception that Antabuse offers a magic potion to eliminate the taste for alcohol,—one that the alcoholic's wife may put in her husband's coffee. The place the drug has made for itself is that of an adjunct to the fundamental feature in treatment,—psychotherapy. The alcoholic patient is sick mentally. A drug which gives him an unpleasant reaction is not likely alone to keep him from alcohol. For effective treatment the patient must continue the drug, and he will do this only if interviews with his physician are frequent enough to sustain a desire for continued abstinence.

R. H. K.

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MEDICAL PROFESSION'S AID TO MEDICAL EDUCATION

As the end of the year approaches physicians of means may be thinking of contributions to be made for income tax reduction purposes. In such planning the financial plight of medical schools should be recalled. The cost of medical education comes high. Medical schools, especially those not subsidized by the states' taxpayers are almost certain to fall into the hands of government influence sooner or later through Federal financial aid. (Already great sums of Federal funds are aiding medical schools through research grants. These will continue in coming years of almost sheer necessity. As long as this money represents the lesser fraction of school income, it is unlikely that school policy will come under the thumb of governmental pressures.)

The importance of keeping the medical schools free is appreciated by certain organizations which have moved in the direction of supplying much needed funds. These may to some extent replace the philanthropies of the great private fortunes of the past. One of these is a lay group, the other professional. The first organization is the National Association of Manufacturers. In its resolution adopted in the fall of 1951, it said, "Essential to the perpetuation of the American way of life is a system of education which includes both privately and publicly supported schools, colleges and universities. The privately supported institutions are in a critical financial plight. The public institutions, state and local, are likewise having serious financial difficulties. Industry recognizes the essential contributions made by these institutions to the development of leadership . . . and the development of social and civic competence of our citizenry." (The medical schools are a major drain on the budgets of many universities and thereby weaken the financial structures of these institutions.) To implement this viewpoint the National Association of Manufacturers has set up the National Fund for Medical Education with the aim of annually raising $5,000,000 from private sources. The second organization, a professional one, related to the National Fund for Medical Schools is your American Medical Association which last year started its fund as the American Medical Education Foundation. As an organization it made its first contribution of $500,000,—some of *your* dollars paid in dues.

By the fall of 1951 the National Fund for Medical Education had collected $1,400,000. Grants had been given to 79 medical schools. The four year schools each received $15,000 and the two year schools $7,500 each. Worthy of emphasis is the fact that the money was given by the Fund without any strings tied to the grants. The schools had unrestricted use of these funds. Thus the schools have had funds made available for use as needed to maintain the highest possible teaching standards.

Of the $1,400,000 mentioned above, 40 per cent came from the medical profession. This is as it should be, since the profession has assumed the responsibility of establishing and maintaining high standards in medical education. It was not government which laid down the rules for these standards. It was the Council on Medical Education and Hospitals of the American Medical Association which did so. In 1905 it called the first annual conference of those agencies which were vitally interested in standards in medical education. The one most influential in addition to the Council of the A.M.A. was the Association of American Medical Colleges. Since that time these two organizations in splendid cooperation actually have advanced American medicine to the forefront, a place held without question for four decades.

It is a strange though incontrovertible fact that a high proportion of the medical profession have little interest in medical education and medical schools after they have graduated and become established in practice. It is always a source of wonder to your editor when he meets with this indifference to medical education since it is obvious that the doctor owes his all to his Alma Mater. Most fortunately for him, the medical profession and the medical schools, the American Medical Association through its Council on Medical Education and Hospitals retains its place along with the Association of American Medical Colleges, as the arbiter of what is good medical education.

As the physician of means totals up his gifts before January first to see where they fall in the tax-free 10 per cent of his income, he should not forget either his Alma Mater or the American Medical Education Foundation of the A.M.A. He can thus repay some of his debt for the education only partially paid for by his tuition. But more importantly, possibly his son or his grandson may have the opportunity to get his medical education from teachers unhampered by the deadening influence of federally controlled administrative policy.

R. H. K.

DEATHS

Dr. John C. Ayres, Sr., Memphis and father of Dr. John C. Ayres, Jr., of the same city, died August 18, 1952. Aged 75.

*

Dr. Oswald S. McCown, Memphis, after more than a half-century of medical practice, died August 19, 1952. Aged 79.

*

Dr. Richard Leonard Mathews, Springfield, who had practiced in Robertson County for forty-seven years, died August 16, 1952, in a Nashville hospital. Aged 69.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga-Hamilton County Society

The August 14th meeting of the Society was held at the home of Dr. Fred Marsh, president, in Riverview. Dr. Marsh, after serving the more than 150 physicians with a delicious barbecue plate, introduced the guest speaker of the evening. He was Dr. Baker Hubbard, Jackson, Tennessee, who spoke on the "Use of the Flat Plate X-Ray in Diagnosing Ailments of the Abdomen."

*

Consolidated Medical Assembly

Over 100 members of the Assembly from some fourteen counties of West Tennessee gathered at the farm of Dr. Charles Webb (Quinlac Farm) for the Assembly's Annual Barbecue. One of Dr. Webb's buffalo from the farm supplied the physicians with both barbecue and stew. Dr. Webb, after welcoming the members and many physician-visitors from Nashville and other sections, explained briefly his interest in the development of Quinlac Farm with its varied stock of cattle and fowl. Dr. Duncan Eve, Nashville. made the response to the welcome.

*

Knoxville Academy of Medicine

Dr. E. Park Nicely was scheduled to address the Academy on its August 19th meeting on the subject of "Retropubic Prostatectomy," with discussion by Dr. G. A. Williamson, Jr. The Secretary, Dr. Ralph Monger, in the Academy's Bulletin acknowledged the gift of a splendid public address system from the following members: Drs. E. E. Miller, W. K. Swan, John Moore, H. L. Pope, Frank Turney, George Trotter, C. L. Chumley, L. C. Caylor, J. B. Naive, J. G. Eblen, E. C. Idol, and Earl Donathan.

*

Memphis-Shelby County Society

One hundred and two members and guests of the Society attended the dinner meeting at the Memphis Country Club on July 1. Dr. Sam Raines reported that arrangements had been made with Dr. Hyman whereby courses in public relations will be arranged for all medical students at the University of Tennessee. President Henry Gotten made another urgent appeal for doctors to support the "Get Out the Vote Campaign." The scientific program was a symposium on "Fluid Balance," with "Medical Aspects" by Dr. Daniel Brody; "Relations to Renal Function" by Dr. Holt Maddux; "Surgical Problems" by Dr. Edward Stevenson; and "Pediatric Problems" by Dr. Fontaine Hill. Discussants were Drs. D. B. Morrison, J. D. Hardy, and J. E. Whiteleather.

★

The Society has had a very favorable public reaction to its recent Television program on WMCT-TV entitled "Your Health and Your Freedom." The half-hour program dealing with the private practice of medicine was participated in by Dr. John E. Cox, Dr. C. D. Hawkes, Dr. Lean Hawkes, and Bob Bird, Executive Secretary of the Society. Subjects included in the program were medical care costs, prepaid hospital and surgical insurance, the Tennessee Plan, with its newly increased income limits for full coverage, the profession's continuous efforts to provide better medical care, and the public service activities of the Society's executive office. It was estimated that more than 100,000 persons in the Memphis area viewed the program.

★

Rutherford County Society

Dr. William Shaklett, Murfreesboro, president of the Society, gave strong support to the Red Cross blood program by a public statement urging citizens to replace blood supplied by the Agency. He pointed out that heavy civilian and military demands on the Red Cross's banks made it necessary that Rutherford Countians increase their replacements if the County was to remain in the Blood Collecting Program.

NATIONAL NEWS

Medical Research Grants by N.I.H.

National Institute of Health, in its first publication of medical research grants this fiscal year (July 1, 1951, to June 30, 1952), announces that *almost $9 million has been distributed or allocated since last October.* N.I.H. postponed the usual fall and winter announcements in preparation for a change in announcement procedure. Henceforth all grants will be announced in *Public Health Reports.* Almost a thousand separate projects are sharing in current distributions for work in cancer, heart disease, arthritis and metabolic diseases, dental diseases, mental health, neurological diseases and blindness and microbiology, as well as general health problems. Following is a breakdown of grants just announced, but allocated in October and February:

	No. of new projects	Amount	No. of renewals	Amount
October	249	$2,188,699	288	$2,412,271
February	176	1,831,563	224	2,473,144
Total	425	4,020,262	512	4,885.415

★

Commerce Department Reports on Physicians' Income for 1950 and 1951

Survey of Current Business, Commerce Department publication, carries the results of the latest survey of *incomes for physicians,* dentists and lawyers for 1950-51. Physicians' incomes rose at about the same rate as the general public's income. The sample of 639 physicians is compared with the results of the major Commerce Department survey for 1949 in which replies from almost 30,000 physicians were used. The Department statisticians weighted the returns in some respects to give a more accurate final average, but did not cover every possible contingency. The chart below shows the *mean net* income of all physicians with certain Commerce Department breakdowns for the three years covered. Figures for 1949 are from the earlier study published in 1950.

	mean net income in dollars			*percent increase*		*No. of cases in sample*
	1949	1950	1951	1949-50	1950-51	
All physicians	11,058	11,538	12,518	4.3	8.5	639
Major independent	11,858	12,345	13,378	4.1	8.4	413
Major salaried	8,272	8,727	9,522	5.5	9.1	266
Non-salaried	11,744	12,324	13,432	4.9	9.0	349
All-salaried	8,434	8,794	9,542	4.3	8.5	165

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

Grants by the National Cancer Institute for study on a cancer diagnostic test have been made to Dr. D. H. Sprunt ($16,103) and to Dr. C. C. Erickson ($10,001) of the Department of Pathology. The agency also granted $30,951 to Dr. F. E. Whitacre of the Department of Obstetrics and Gynecology for studies on women with early or suspected cancer. A grant of $19,566 was made to Dr. L. M. Graves of the Department of Preventive Medicine and Director of the Memphis and Shelby County Health Department for a follow-up study of patients with early or suspected uterine cancer found by cytology screening of the female population.

*

Dr. F. C. Wilson, Jr., and Dr. W. A. Neely have recently joined the staff of the Division of Surgery to conduct research on the effects of diet on the ability of the cancer patient to undergo surgery and research on thermal burns respectively.

*

A. U. S. Public Health Service grant of $8,991 has been made to Dr. J. D. Hardy of the Department of Surgery to study the body's reaction to operations done in a series as in chest and bone surgery and in skin grafting after burns.

*

The Division of Pathology and Bacteriology has appointed the following physicians as instructors,—W. S. Gilmer, T. D. Norman, Helen Prieto, Y. S. Song of Korea, P. Finick of Switzerland and B. Larsson of Sweden. Dr. Luis Prieto, Jr., was appointed as assistant professor.

All physicians within a 150 mile radius of Memphis in Tennessee, Arkansas, Alabama, Missouri, Kentucky and Mississippi are being surveyed by a Coordinating Committee of Physicians, in cooperation with the Postgraduate Department of the University, relative to selecting postgraduate courses to be given at the University of Tennessee Medical Units. Committee members are Dr. W. T. Satterfield, Memphis, for the Tennessee Academy of General Practice, Dr. N. Gotten for the Memphis and Shelby County Medical Society, and Dr. J. Paul Baird, Dyersburg, for the Tennessee State Medical Association.

*

Nashville Medical Assembly

The Nashville Medical Assembly Committee has practically completed its organizational plans for the forthcoming Nashville Medical Assembly which will be held in the Iris Room of the Hermitage Hotel in Nashville from October 29 through 31. Physicians from at least six southeastern states are expected to participate since the Medical Assembly has developed into a regional meeting. Four to five hundred are expected to register for the sessions.

The Nashville Medical Assembly has been extended to a full three-day meeting for the first time and nationally known essayists will be the speakers. The subjects covered will deal with the latest developments in medical science and the program is directed especially for the assistance of general practitioners throughout the area.

The Nashville Academy of Medicine will be host at a dinner and scientific program on Wednesday evening, October 29th. Dr. A. A. Weech, University of Cincinnati School of Medicine, Cincinnati, Ohio, will be the speaker. His subject will be "A Pediatrician Looks at the Behavior Problems of Children."

On Thursday evening October 30, the annual banquet will be held at the Club Plantation on Murfreesboro Road, where a delicious steak dinner will be served. The banquet will be preceded by a cocktail party and the guests will be entertained by nationally known artists, following which there will be dancing to a good orchestra.

Physicians planning to attend are especially urged to bring their wives, as the Ladies' Auxiliary of the Nashville Academy of Medicine has planned several interesting affairs including a style show and luncheon. Ladies are welcome and urged to attend the annual banquet.

The program will offer subjects presented by outstanding clinicians and teachers as follow:

Dr. Ira A. Ferguson of Emory University, "Management of Abdominal Injuries"; Dr. William D. Robinson of University of Michigan, "Management of Rheumatoid State"; Dr. Joseph W. Reddoch of Tulane University School of Medicine, "Toxemia of Pregnancy"; Dr. Joseph A. Johnston, Henry Ford Hospital, "Endocrine Problems of Adolescence"; Dr. Edward F. Parker of the Medical College of South Carolina, "Hemoptysis"; Dr. Albert L. Brown of Cincinnati University, "Recognition of Common Disorders of the Eye"; Dr. Laman A. Gray of University of Louisville Medical School, "Sterility"; Dr. James Barrett of Washington University, "Early Care and Plastic Repair of Burns"; Dr. William F. Mengert of University of Texas, "Prolonged Labor"; Dr. Richard B. Capps of Northwestern University, "Diagnosis and Management of Diseases of the Liver"; Dr. George S. Mirick of Johns Hopkins Hospital, "Management of Common Minor Respiratory Tract Infections"; Dr. Condict W. Cutler, Jr., of Columbia University, "Surgery in the Aged"; Dr. Richard J. Bing of the University of Alabama, "Indications for Cardiac Surgery"; Dr. Arthur Carlton Ernestene of Cleveland Clinical Foundation Hospital, "Management of Congestive Failure"; Dr. Clarence S. Livingood of University of Texas, "The Recognition and Management of Common Disorders of the Skin."

Oak Ridge Gets Quartet of New Physicians

Tennessee's Atomic City had its medical manpower increased by four in recent weeks. The physician newcomers are Drs. Victor Carey, Guy Fortney, J. M. Hays and Sam Root. Drs. Fortney and Hays are general practitioners, Dr. Carey an urologist, and Dr. Root in internal medicine. All of them have offices in the Medical Arts Building.

Tennessee Academy of Preventive Medicine Organized

Five physicians, all in public health work, were the incorporators of a new organization known as the Tennessee Academy of Preventive Medicine. They are Dr. R. H. Hutcheson, Public Health Commissioner, Dr. John J. Lentz, Davidson County Health Officer, Dr. Monroe F. Brown and Dr. Cecil B. Tucker, of the Public Health Staff of Tennessee, and Dr. Paul Golley, Director, Chattanooga-Hamilton County Public Health Department. Requirements for membership in the organization include a master's degree in public health and a minimum of two years' work in public health administration. Members of the Tennessee Academy will be able to affiliate with the American Board of Preventive Medicine and Public Health.

Objectives of the Academy include: 1) initiate measures to enhance the prestige and attraction of the specialty as a career, 2) further recruiting of able medical graduates into the specialty, 3) promote continued education of its members, 4) to study and make recommendations relative to research, practice and policy in preventive medicine and public health.

PERSONAL NEWS

Dr. George L. Sivils has opened new offices for the practice of internal medicine at 307 Professional Building, Chattanooga.

Dr. J. T. Elmore, formerly of Little Rock, will begin the practice of medicine at Halls, Tennessee, this month. He will occupy the space formerly occupied by **Dr. James K. Hinton.**

Dr. Raymond C. Ramage, a diplomate of the American Board of Surgery, has opened an office at 150 Commerce Street in Kingsport for the practice of general and thoracic surgery.

Dr. Donald Bales is now associated with **Dr. John Powers** in Kingsport. Dr. Bales recently completed a residency in internal medicine at Henry Ford Hospital, Detroit.

Dr. Charles Pack, Memphis pediatrician, received some broken ribs in a recent accident when his car was in collision with a Memphis bus.

Dr. Byron O. Garner, Union City, addressed the local Rotary Club on the subjejct, "Specialization in the Field of Medicine and Surgery." Dr. Garner has recently become a diplomate of the American Board of Surgery.

Dr. J. Edward McKinney, native Atlantan, has joined the staff of the Doyle Currey Clinic in North Chattanooga.

Dr. J. A. Vaughan, Memphis, has retired as house physician at the Peabody Hotel, a position he has held for forty-five years.

Dr. James W. Davis, Morristown, leaves this month for New Orleans for a three-year surgical residency as a fellow of the Osler Medical Foundation.

Dr. Mae E. Porter, native of Rockwood, has opened an office for the general practice of medicine in Spring City.

Dr. Rudolph Matas Landry, formerly of New Orleans, is a new appointee to the surgical staff of the Newell Clinic in Chattanooga. He is a Board diplomate and a F.A.C.S.

Dr. Harold T. McIver, formerly of McKenzie, is now associated with **Dr. G. H. Berryhill**, Jackson, in EENT practice. Dr. McIver is a diplomate of the American Board of Otolaryngology and is eligible for the Board on Ophthalmology.

Dr. Albert L. Cooper of Shelbyville is attending post graduate courses at Cook County Graduate School of Medicine, Chicago.

Dr. Clarence Shaw of Chattanooga has been elected President of the Chattanooga Philharmonic Association.

BOOK REVIEW

New and Nonofficial Remedies. Issued by the Council of Pharmacy and Chemistry of the American Medical Association, Philadelphia, J. B. Lippincott Co., 1952. Price $3.00.

The annual listing of the drugs approved by the Council of Pharmacy and Chemistry as safe and effective is a constant reminder of organized medicine's activities in protecting the population of this country against dangerous and untried remedies. Here is a tangible return for the annual dues paid to A.M.A. by the physicians of this country. It is hoped the doctor will lean on this expert opinion for which he has paid to aid him in providing the best possible care for his patients.

R. H. K.

* * *

Of Little Patients. By Renee Zindwer, M.D., Richmond, Va. John Knox Press. 1952. Price $1.95.

In this book a group of young patients are depicted by a series of delightful sketches, each accompanied by a brief, entertaining story. The author reveals a warm understanding of these little ones in their contacts with doctors, nurses and hospitals. Everyone who has observed children in such an environment will discover a few moments of genuine pleasure here.

Blair Batson, M.D.

* * *

Reduce and Stay Reduced. Norman Jolliffe, M.D. New York, 1952, Simon and Schuster. 235 pages. Price $2.95.

With the passage of years both patient and the doctor have become cognizant of the fact that reduction in over-weight is probably the most important item in the field of preventive medicine, as measured in terms of future good health and longevity. The physician often either has not had the basic knowledge or the time to explain the physiologic processes involved in nutrition and in over-weight. These are so helpful in making the intelligent patient anxious to cooperate in the outlined regime. Therefore the patient has often needed to turn to magazine articles or popular books in book stores. These have usually been pseudo-scientific, faddish or plain quackery.

In this book by Dr. Jolliffe the doctor has a valuable aid to be recommended to his patient, a book written by an authority in nutrition, a faculty member of Columbia University and a member of the Nutrition Board of the National Research Council.

The first part of the book is a very readable simple course in nutrition. This provides the "why" and will aid the serious dieter in maintaining his weight level after loss, guarding against relapse. The second portion of the book presents numerous basic diets for adults, for gaining youths, pregnant women, etc. Many cooking hints are given.

Here is a book to be urged upon the intelligent and serious dieter. And your reviewer would add, if you, the doctor, have not given thought in recent years to dietary advice in weight reduction, this book will offer you a handy reference book. It will help you in giving adequate advice to your patients.

R. H. K.

LOCATION WANTED

Forty year old graduate of Syracuse College of Medicine. Surgical resident, New York Hospital 1939-41. Thoracic Surgical Resident, Triboro Hospital, Jamaica, L. I., N. Y. Lt. (jg) MC-USN 1941. Resigned 1949 (Commander). Chief of Surgery, V.A. Hospital, Kerrville, Texas, 1949-51. F.A.C.S., Assoc. Fellow A.C.C.P. Certified by American Board of Surgery. Qualified for Board of Thoracic Surgery.

LW-6

* * *

Thirty-one year old physician, married, with 41 months' military service. M.D. Degree, Washington University 1950. Now in a rotating residency in Charity Hospital, Monroe, Louisiana.

LW-8

Thirty-two year old physician, married. M.D. Degree from Tulane. Rotating Residency, Baptist Hospital, Birmingham. Two years army service, three years general practice.

LW-9

* * *

Thirty-one year old physician, married. M.D. Degree from Cornell University, 1945. Two years military service. Assistant Residency in general surgery, Bellevue Hospital. Presently completing two year residency in thoracic surgery at Bellevue Hospital.

LW-10

* * *

Physician, aged 32, married, Baptist. M.D. from Washington University, 1944. Five year surgical residency at Charleston, West Virginia, General Hospital, 1947-52. Two years military service.

LW-11

* * *

Twenty-seven year old physician, married, no children. Presbyterian. M.D. Temple University, 1951; general rotating internship, Temple University Hospital, 1952. Draft status: three years military service, honorable discharge, priority group II.

LW-12

* * *

Twenty-eight year old physician, married. M.D. from Emory University, 1951. Now interning at Wayne County Hospital, Detroit. Interested in assistantship or partnership in general practice.

LW-13

* * *

Position desired in an institution, public health, or industrial organization. Thirty-three year old physician, married. M.D. Degree from St. Louis University, 1947. Four years' general hospital training; one year general practice.

LW-14

* * *

A resident physician in a town within fifteen miles of Memphis advises this office as follows:

"The City of —— is in a very great need of additional doctors. Any help you can give us in solving this situation will be appreciated."

PW-2

General Practitioner Wanted

An established physician located within 50 miles of Nashville desires an associate. He has new and adequate clinical facilities.

PW-5

EENT Specialist Wanted

This office has received a request that we assist the town of Princeton, Ky., locate an EENT physician. Princeton has 5,500 population, three factories, and a new industry coming in. It is located in a prosprous agricultural region. A new 35-bed hospital has been completed. There is no EENT specialist within 30 miles. Other adjacent towns include Cadiz, Eddyville, Kuttawa, Marion, Providence, and Dawson Springs—all within 25 miles of Princeton.

PW-6

Otolaryngologist Wanted

An East Tennessee city is in need of a resident otolaryngologist and preferably one who does ophthalmology also. The location in East Tennessee is in a town of about 15,000 population and at least 10,000 population in near-by rural areas. Adequate office space is available, together with hospital facilities and the full cooperation of a group of four doctors, and considerable practice is assured from the beginning.

PW-8

* * *

The Midland Community, located between Murfreesboro and Shelbyville, has built a medical center and desires a local physician. Building equipped with two offices, a waiting room, and supply room, oil heat, and equipment—all available without charge.

PW-9

* * *

A physician in an upper East Tennessee City will be away from his practice for one year, and would like to have a young physician take over for him during this absence. After July 1, a five-room fully equipped office building which is visited daily by 40 to 75 patients will be available. The office is located in an industrial city of 14,000 people, and across the street from a 32-bed hospital. Hospital privileges assured. An excellent opportunity for a general practitioner. Various financial arrangements possible, and good opportunity for new doctor to remain permanently.

PW-10

* * *

Cross Plains, Tennsseee, thirty miles north of Nashville, twelve miles from Springfield. Three room office suite available from local drug store without charge.

PW-11

* * *

Lions Club of Huntland, Tennessee, is completing a clinic building and desires physician to occupy at reasonable terms and serve community of 1,000 families. Huntland is located just off Highway 64 in Franklin County. Agricultural community.

PW-12

* * *

Federal Civil Defense Administration Regional Offices are authorized to employ full-time medical directors to handle medical civil defense problems, at a salary of $10,900 per year.

PW-13

* * *

Forty-six year old Memphis internist, temporarily disabled, desires a young, well-trained associate, not necessarily a Board man. Salary or other financial arrangement open. Office is shared with another internist who would be available for help.

PW-14

*

V. A. Hospital has position available for physicians interested in Psychiatry as well as for an Internist, Neurologist, Radiologist and Pathologist. There are provisions for annual and sick leaves, and for attendance at special courses.

PW-15

ANNOUNCEMENTS

American Heart Association to Issue New Scientific Journal, "Circulation Research"

A new bimonthly scientific journal, "Circulation Research," the only publication devoted exclusively to reports on fundamental studies related to the heart and circulation, will be issued by the American Heart Association, beginning January 1953, as a further step in the development of its professional education program. Grune & Stratton, Inc., New York medical publishers who also publish "Circulation," the monthly journal of the American Heart Association, will publish the new journal. "Circulation Research" will be edited by Dr. Carl J. Wiggers, Professor and Director, Department of Physiology, Western Reserve University School of Medicine, Cleveland.

*

Special Letter

Malaria Among Korean Veterans

Dear Doctor:

As was the case in 1951, we are having reported many cases of malaria among armed forces personnel returning from Korea. Information has been obtained to indicate that most of them left Korea in the fall of 1951 and are at this time developing their first attacks of malaria. Some delay in diagnosis is being observed.

During periods while such cases remain untreated the possibility of local transmission is present. Every effort is being made to investigate the home environment of the cases reported and residual spraying is being conducted with chlordan wherever indicated.

In order to make every effort to prevent the spread locally, it is requested that blood smears be done on all suspicious cases and that the smears be sent to the State Laboratory for examination. Also, it will be appreciated if all cases are reported promptly.

Your cooperation will be appreciated.

Yours very truly,

R. H. Hutcheson

Commissioner

RHH CBT/pm

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Committee on Postgraduate Instruction in Obstetrics

FRONT

Date

Name Age M.S.W. Color

Address

Date of Last Period Date of Quickening Confinement

Number of Children Living Dead Stillborn

Character of Labors:

Miscarriages:

P. M. H.—operations:

Physical Examination: Teeth: Tonsils: Heart:

Thyroid: Breasts: Lungs:

Abdomen:

Pelvic Measurements: Spines: Crests: Ext. Conjugate:

True Conj.: Transverse of Outlet:

Type of Pelvis:

Pelvic Examination: Blood Count: Date—Hb RBC WBC

Blood Wassermann: 1.

2.

BACK

PRENATAL EXAMINATION

Date									
Blood Pressure									
Weight									
Vaginal Examination									
Height of Fundus									
Fetal Position									
F. H. S.									
Engagement									
Diet									
Bowels									
Bleeding									
Headache									
Edema									
Pain									
Vertigo									
Vomiting									
Eyes									
Urine: Albumin									
Sugar									
S. G.									
Microscopic									

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Journal of the Tennessee State Medical Association

OWNED AND PUBLISHED BY THE ASSOCIATION

Volume 45 OCTOBER, 1952 Number 10

Though diverticulosis is not uncommon, diverticulitis is quite infrequent. Fortunately the complications requiring surgical interference are rare. Their management has been presented in this paper.

SURGERY IN DIVERTICULITIS

Review of the Surgically Treated Cases at the Vanderbilt and St. Thomas Hospitals Within Recent Years

J. LYNWOOD HERRINGTON, JR., M.D., Nashville, Tenn.

It is rather generally agreed at the present time that acute diverticulitis per se is best managed by medical means, surgery being reserved for the complications of the disease which fail to respond to conservative measures.

The complications necessitating surgical management are recurrent or complete obstruction, abscess formation not responding to antibiotic therapy, massive hemorrhage, which is admittedly infrequent, perforation and fistula formation. Also when the presence of carcinoma cannot be excluded in the diseased bowel segment, this obviously constitutes an additional indication for operation.

General Considerations

Approximately 5 per cent of the population over the age of forty have diverticula, but only about 10-20 per cent of these individuals ever develop symptoms of acute diverticulitis. Further analyses show that between 15 and 25 per cent of people with diverticulitis will develop complications requiring surgery. The disease is more common in the male and is rarely seen before the fourth or fifth decade of life. In approximately 75-80 per cent of cases the disease is confined to the sigmoid colon and the diverticula when present are usually numerous in this region. The rectum is rarely, if ever, involved. The disease may occasionally extend into the descending and transverse colon but these findings are infrequently encountered. A solitary diverticulum is sometimes found in the cecum, small bowel, duodenum or stomach. In these locations only rarely does the diverticulum give rise to symptoms but when symptoms do occur, the surgical problem is entirely different from that applicable to the disease in the sigmoid colon.

No one surgeon, except perhaps one in a large medical center, has the opportunity to treat a large number of patients with the complications of diverticulitis. The surgeon confronted with an occasional case, on reviewing the literature will find the principles of management to differ widely and little can be found concerning follow-up results. Many authors tend to place all emphasis on the management of the complication and thereby seem to completely ignore the underlying disease. There is also conflicting opinion regarding the operative procedure best suited for the particular complication in question, as well as disagreement regarding the proper timing of the operation.

Complications

The experience with this problem has also been limited in our community, but I have attempted to review the series treated at the Saint Thomas Hospital from January, 1946, to June, 1951, and at the Vanderbilt University Hospital from January, 1937, to June, 1951. There has been a total of eighty-four patients admitted to the two institutions during the above years with the chief diagnosis of diverticulitis. Sixty of these patients had the acute phase of the disease and fifty-four were treated conservatively. Six patients among the group of sixty were explored because acute appendicitis or a ruptured ovarian cyst could not be excluded in the differential diagnosis. Four patients among the six operated upon were found to have acute sigmoid diverticulitis. The remaining two patients had acute solitary diverticulitis of the cecum. In one the diverticulum was excised and in the other the abdomen was merely closed because the diverticulum lay in close proximity to the ileocecal valve, thus rendering its excision impossible. Twenty-four patients of the entire group of eighty-four were admitted with complications of diverticulitis (Table 1), and the sigmoid colon was the primary site of the disease in all cases except one. Twenty-two of these twenty-four patients were subjected to operation. In the group were ten males and twelve females. The ages varied from thirty-nine years to eighty-seven years, with the average age being sixty-three years.

Table I

Complications of Diverticulitis

Obstruction	14 cases	58%
Abscess	6 cases	25%
Perforation	3 cases	13%
Fistula	1 case	4%

1. **Obstruction.** Obstruction may occur in the acute phase of the disease and is precipitated by edema of the bowel wall and surrounding tissues associated with the inflammatory process, but usually here the obstruction is incomplete, mild in character and most always subsides with bed rest and other conservative measures. However, with recurring attacks of the disease the resultant fibrous tissue laid down in the bowel wall and perisigmoidal tissues may be sufficient to produce obstruction which no longer responds to the usual medical regime. When the obstruction is complete and the proximal bowel becomes massively dilated, this obviously constitutes a surgical problem. Incomplete obstruction, associated with an acute exacerbation of the chronic form of the disease should first be given a chance to subside on medical management, for edema may play the dominant role in initiating the obstruction. Thus, surgery should be reserved for those cases of recurrent obstruction not responding to medical treatment, complete obstruction and always when the presence of carcinoma of the colon cannot be excluded. Barium enema studies are by far the most important single aid in ruling out carcinoma, but at times even the radiologist is unable to distinguish between the two diseases, particularly if the obstruction is complete or almost complete. Apparently there is no evidence to support the concept that patients with diverticulitis may later develop carcinoma; the two diseases merely have a predilection for the older age groups. Sigmoidoscopic studies are usually of little value in differentiating the two diseases. A fact not generally appreciated is that bleeding per rectum, even massive in degree, may occur with cases of acute diverticulitis. Some authors have stressed the point that patients with the complications of diverticulitis usually give a long past history of abdominal symptoms. This may be true in general, but on the other hand, the complication may present itself as the initial symptom of the disease. We found this to be true in some of our patients with obstruction. It may be difficult at exploration to distinguish diverticulitis from carcinoma, and on occasion it is not until the bowel is sectioned that the correct diagnosis becomes apparent.

When the surgeon elects to operate upon a patient with obstruction due to diverticulitis, the type of operation to be carried out depends upon various factors. The patient's age must be considered, the general physical condition, the type of obstruction and the relative extent and stage of the inflammatory process as shown by the pulse rate, temperature course and the degree of leukocytosis. If the obstruction is complete and the patient desperately ill, a cecostomy or, preferably, a transverse colostomy carried out almost immediately is usually a lifesaving procedure. The decompressed bowel may then be safely and adequately prepared for resection at a later date. The interval of time between the initial decompression operation and subsequent resection according to most observers should be at least three months, sufficient time being allowed for the inflammatory reaction to subside. This policy may be sound, but most of the literature dealing with this delay between operations was written prior to the introduction of our most recent antibiotics. Further study may prove that this delay may now be considerably shortened. It is needless to mention that if one suspects the obstruction to be due to carcinoma, the delay beween operations is then shortened to ten days to two weeks.

In the past, various authors have advised the establishment of a temporary colostomy orad to the point of obstruction, then allow time for the acute process to subside and later close the colostomy without resecting the diseased bowel. Pemberton[1] condemns this procedure and found that in twenty-nine cases thus treated, twenty patients had further exacerbations of the disease.

In dealing with the "good-risk" patient suffering from recurrent or incomplete obstruction and in which the inflammatory process appears chronic, it seems perfectly justifiable to adequately prepare the bowel and then proceed immediately with an intestinal resection. A proximal vent is usually established at the time of resection to insure additional safety to the suture line. As recent as a decade ago this latter procedure was but rarely used and was thought to be indicated in but a few highly selected cases. Today, with antibiotics, adequate blood replacements and knowledge of electrolyte balance, the operation of primary resection has been made safe and in this group is becoming the operation of choice. During the decade past the Mikulicz operation was widely accepted but, as is well known, this procedure was associated with certain disadvantages:—namely, the likelihood of postoperative obstruction and hernia formation; the limited resection which it necessarily entailed left many diverticula behind; and also when carcinoma was accidentally discovered in the exteriorized loop, the patient had been subjected to an inadequate operation.

When dealing with complete sigmoid obstruction in an elderly, "poor-risk" patient with a short life expectancy, it may perhaps be wise to establish a permanent colostomy orad to the obstruction and advice against a subsequent resection. Diverting the fecal current will in the great majority of instances bring about complete subsidence of the inflammatory process, but re-establishment of bowel continuity is warned against, as in practically every instance it reactivates the disease. The Mikulicz procedure may perhaps prove its limited usefulness in this type of case.

Cases. In this series there were fourteen patients undergoing surgery for obstructive symptoms. In nine of the cases, carcinoma could not definitely be ruled out preoperatively by clinical and X-ray study, but on pathological section no evidence of carcinoma was found in any of the resected specimens. In this group, symptoms had been present from nine days to ten years prior to surgery. It is of interest to note that in several patients obstructive symptoms were the initial complaint and were noted from a few days to a few months prior to surgery. In nine of the fourteen patients the obstruction was incomplete and following adequate preoperative preparation, a primary sigmoid resection was done with the establishment of a proximal vent. All patients survived the operation. One patient died six weeks postoperatively, an elderly diabetic with generalized arteriosclerosis. A second patient died five months postoperatively from heart failure, and barium enema studies several days prior to death showed a defect in the transverse colon suggestive of carcinoma. The remaining seven patients are asymptomatic and have been followed from a few months up to four years.

Two patients were seen with complete obstruction of the sigmoid colon and each underwent immediate cecostomy for decompression. In one of these patients carcinoma was later excluded by appropriate studies and, due to the patient's age and general condition, a subsequent resection was not advised. He was sent home with the functioning cecostomy. Follow-up study revealed that he continued to experience intermittent left lower quadrant pain, and two years later the cecostomy had to be reopened due to recurrent obstructive symptoms. I think it was excellent judgment to have advised against a resection in this case, but I believe the disease could have been kept quiescent had he had a permanent transverse colostomy. This patient has since died of causes not related to diverticulitis. In the other patient with complete obstruction, carcinoma was suspected and a resection of the sigmoid colon was carried out two weeks following cecostomy. The bowel had been adequately prepared in the meantime, the operation was not appreciably difficult technically and the postoperative course was smooth. No evidence of carcinoma was found in the resected specimen and the patient is now well two years following surgery.

A third patient with complete obstruction was treated by a three stage procedure; namely, transverse colostomy, resection of the sigmoid colon fifteen months later and subsequent colostomy closure. Carcinoma was definitely excluded following establishment of the transverse colostomy. This patient is well four years following surgery.

One patient with recurrent symptoms of partial obstruction was operated upon but at operation no obstruction was found, as the process had apparently subsided. He has remained well over a four and one-half year follow-up.

Another patient with acute diverticulitis and obstruction was found at operation to have a loop of small intestine plastered and kinked against the acute inflammatory disease in the sigmoid colon. The small bowel obstruction was freed and the patient has had no further attacks of diverticulitis now for twelve months.

Smithwick's[2] series published in 1942 showed a mortality of 17.1 per cent among thirty-three patients undergoing sigmoid resection for the complications of diverticulitis. The Mayo Clinic[1] series showed a mortality of 15 per cent prior to 1940 and from 1940 to 1945 the mortality dropped to 4 per cent. This decrease, in great part, was attributed to the better preparation of the patient and the use of the sulfonamide drugs.

2. **Abscess.** Patients with an abscess resulting from the slow perforation of inflamed diverticula will usually give a recent history suggestive of acute diverticulitis if questioned carefully. A mass will, in many instances, be palpable, usually in the left lower quadrant but may be felt best on rectal or pelvic examination. The abscess will usually respond to antibiotic treatment, and statistics indicate that approximately 75 per cent will subside with this mode of therapy. However, most observers feel that the chances of curing the patient permanently are very small indeed unless a subsequent resection of the bowel containing the diverticula is carried out. If the bowel is not resected later, the chances of the patient developing a recurrent abscess or other complication are very great. The abscesses not responding to antibiotic treatment and necessitating surgical drainage should preferably be drained by an extraperitoneal approach, but sometimes the abdominal approach is necessary. At the time of drainage it is wise to carry out a transverse colostomy and later resect the diseased bowel.

Cases. There were six patients in this group with abscess formation. Two of these were recent cases treated with antibiotics which brought about resolution of the acute phase of the condition. No definitive surgery has yet been done on these patients.

One patient with a left lower quadrant abscess was treated successfully with antibiotics and two months later underwent a sigmoid resection and cecostomy. His postoperative course was excellent and his temperature did not exceed 100°. He was operated upon a little over a year ago and has remained free of symptoms.

One patient underwent exploration, the lower abdominal abscess was evacuated and the abdomen closed without drainage. The postoperative course was uneventful. This patient was operated upon four years ago and has continued to have recurrent bouts of left lower quadrant pain and is unable to work at the present time.

Another patient had an upper abdominal abscess resulting from a perforated duodenal diverticulum. The abscess was evacuated, the perforation found and closed and a gastrojejunostomy performed. This patient has been followed one and one-half years without recurrence of symptoms.

The last patient in this group, a thirty-nine year old female, deserves more detailed comment as her case serves to bring out several important features. She was seen approximately four years ago in a small community hospital with a lower abdominal mass. A barium enema was not done and apparently little emphasis was placed on her recent history of left lower quadrant pain and fever. She was told she had a fibroid tumor and at operation a perisigmoidal abscess was found which was drained through the laparotomy incision. A fecal fistula promptly developed which drained profusely for the next seventeen months, and barium enema studies during this interval showed numerous diverticula of the sigmoid. With the fecal fistula still present a sigmoid resection was done without first establishing a transverse colostomy. The operator encountered a dense inflammatory reaction involving the sigmoid colon, all surgical landmarks were obliterated and the operative note stated that the resection was of necessity a very limited one. Apparently the anastomosis was performed between diseased limbs of bowel, as the suture line promptly broke down and another fecal fistula developed. This fistula closed spontaneously after four months, but subsequently the patient developed another episode of acute diverticulitis resulting in obstruction at the site of the previous anastomosis. A transverse colostomy was then established and the patient still has her colostomy at the present time. She will possibly undergo another sigmoid resection in the near future for extirpation of the residual disease process.

First, it appears that an error in diagnosis resulted in this patient being subjected to the initial operation, as a barium enema was not apparently considered in the preoperative workup. As regards the seventeen month delay in waiting for the fistula to close spontaneously, most people feel that there is little to be gained by temporizing unless the fistula is indeed small and here only a few weeks delay is advised. It appears that if the fecal fistula resulting from the first operation had been treated by a transverse colostomy and later a sigmoid resection, considerable morbidity could have been spared this patient.

3. **Perforation.** Perforation complicating acute diverticulitis was associated with a mortality rate of 25 per cent in the report published by Smithwick in 1942. A perforation may result in either a local or widespread peritonitis. The symptoms usually are ushered in abruptly, particularly when the perforation is large and the amount of peritoneal soilage is great. The condition constitutes a surgical emergency and frequently, if the patient has not previously been seen by his physician, the diagnosis of perforated appendix or a ruptured ovarian cyst is entertained. Here again the age and physical condition of the patient, along with the relative extent of the inflammatory process are the deciding factors governing treatment.

Possibly the most widely adopted method of management is to place a drain down to the left lower quadrant and at the same time establish a transverse colostomy in the right upper quadrant. The inflammatory process will then subside with the fecal current diverted, and sigmoid resection may be safely carried out at a later date. Attempts have been made to close the perforation but the results obtained are unpredictable. Some observers advocate mere drainage of the left lower quadrant and, at times, this method gives good results, but on the other hand a fecal fistula may result. In the elderly, "poor-risk" patient with generalized peritonitis, to exteriorize the bowel is probably the safest procedure. However, due to the edema and contracture of the mesentery this maneuver may not always be possible. If the bowel can be exteriorized and the patient's general condition improved, a subsequent resection can be carried out later. In the extremely "poor-risk" patient with a short life expectancy, it may be wise to treat the exteriorized bowel according to the Mikulicz principle or else establish a permanent sigmoid colostomy. Only on rare occasions should the exteriorized diseased bowel later be returned to the peritoneal cavity. In dealing with perforation the same principle is emphasized as in dealing with obstructon; that is, after the complication has been controlled, the diseased bowel should be resected unless definite contraindications exist.

Cases. There were three patients in this group with a perforation. One was an eighty-one year old female who entered the hospital with abdominal distention and tenderness. It was felt preoperatively that she had mesenteric thrombosis but at operation, perforated diverticulitis of the sigmoid was found. The sigmoid was exteriorized, the operator was able to close the perforation and later the sigmoid was returned to the peritoneal cavity. A subsequent resection was not done due to her poor general condition.

Another patient with perforation and generalized peritonitis was thought prior to operation to have a ruptured appendix, but at operation the sigmoid bearing the perforation was exteriorized and a resection of the sigmoid colon was done approximately two weeks later.

A third patient found to have a perforation on exploration was treated by closure of the perforation, a drain was placed in the left lower quadrant and a colostomy done orad to the involved bowel. This patient died on the twelfth postoperative day of a cerebral accident, but at necropsy there was no evidence of leakage at the site of closure of the perforation.

The two surviving patients in this group have had no further difficulty one and two years respectively following surgery.

4. **Fistula.** Fistula formation is usually associated with a long standing history of recurrent episodes of diverticulitis. A fistula may result from the surgical drainage of a perisigmoidal abscess or may complicate a sigmoid resection when residual diverticula are left behind and a breakdown occurs at the suture line. The disease process in the sigmoid may rupture through to the abdominal wall or may penetrate adjacent loops of bowel. As is frequently the case in the male, the process may rupture into the wall of the urinary bladder. Sigmoidovesical fistulae are rare in the female, as the uterus and broad ligament structures serve as a barrier against penetration into the bladder. Bladder symptoms may predominate in the cases of sigmoidovesical fistulae and barium enemas, cystoscopy, opaque cystograms and sigmoidoscopic studies are of value in establishing the diagnosis. One cannot make standard rules regarding the treatment of these fistula cases, since there may be circumstances that would determine the procedure that is best indicated for the individual case. In general, if the fistula is very small and the disease process appears relatively inactive, one may be justified in resecting the involved segment of bowel containing the fistula in a single stage operation. However, in the majority of cases the disease process will show signs of activity and a staged procedure, namely, transverse colostomy followed by resection and closure of the fistula will insure increased safety. As time goes on the antibiotics may modify our surgical approach to these problems.

Case. One patient in this series underwent a sigmoid resection with closure of a bladder fistula as a one-stage operation. It was felt that a preliminary transverse colostomy was unnecessary and the postoperative course was excellent. He has been followed for one and one-half years and is free of symptoms.

Recently Pemberton,[3] Bacon,[4] Morton[5] and Colcock[6] have advocated sigmoid resection for frequent severe recurrent episodes of acute diverticulitis, the operation being carried out in the interval between attacks. It is their opinion that most of these patients with severe attacks will in time develop complications and it is better to operate before complications appear.

Summary

In summary, the role of surgery in the management of the complications of diverticulitis has been discussed and the experience with these complications in our community has been reviewed. The basic approach to the problem entails first the management of the complication and later the ultimate control of the disease process. With the modern antibiotics, the new advances made in preoperative preparation and refinements in anesthesia, the surgical viewpoint is becoming more radical in dealing with this disease and perhaps in the future the surgical indications will be still broadened.

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PULSION DIVERTICULUM OF THE HYPOPHARYNX ONE STAGE EXCISION WITH ESOPHAGOSCOPIC ASSISTANCE*

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This case of pulsion diverticulum of the hypopharynx was not selected for presentation because of any unusual or rare qualities, for there are none. Nor does it offer any difficult or interesting diagnostic problems. Instead, it is presented as the type of case in which the otolaryngologist with endoscopic training can best combine these two specialties to offer more to the patient. Just as the thoracic surgeon has combined endoscopy with chest surgery, so I feel that we, in our speciality, must assert ourselves to combine neck surgery with endoscopy, where indicated.

Anatomically, these lesions of the hypopharynx fall directly into the realm of the surgically trained Ear, Nose, Throat and Endoscopy specialist. Yet, by far the majority of these cases have, and are being handled by the general surgeon who so frequently fails to utilize the great advantage of the esophagoscope at time of operation. Also, some general surgeons continue to use the cumbersome, prolonged, two-stage procedure in which the sac is first exteriorized and anchored in the wound near the skin. Then some ten to fourteen days later the sac is excised and the wound permitted to close by secondary intention. This method can give rise to complications of infection, mediastinitis, recurrent laryngeal nerve paralysis, persistent esophageal fistula, and all too often the complication of secondary stricture of the hypopharynx requiring bougenage. The incidence of recurrence of the diverticulum is likewise high.

The single stage technic first used by Wayne Babcock and Chevalier Jackson[1] offers a simple, safe and certain method for removal of the entire sac with almost no danger of secondary stricture or recurrence of the hernia.

Etiologically, the pulsion type diverticulum of the hypopharynx is a herniation of the mucous membrane of the hypopharynx through some weak point in the fibers of the cricopharyngeus muscle. The most frequent site is the left posterolateral aspect of this muscle. Other than this weakness of the muscle wall, combined with some possible muscle spasm below, there are no known causes for this mucous membrane herniation. The incidence of occurrence seems greatest in males of fifty years and older.

Symptoms of this condition are usually progressive dysphagia, regurgitation of previously ingested food and frequent eructation of gas. Pain is rarely a symptom, yet a feeling of fullness and discomfort in the neck is usually associated with it. Cough, hoarseness and a characteristic gurgling noise are frequently present. Weight loss and malnutrition are present as the dysphagia progresses.

The diagnosis can be readily established by a careful history, examination of the neck, and by X-ray studies of the esophagus made after the ingestion of a barium mixture. Should an esophagoscopic examination be made, great care should be taken as perforation of the diverticulum sac is a grave possibility.

The only treatment is surgical excision of entire diverticulum. Various technics have been employed, but the procedure first introduced by Babcock and Jackson, utilizing the esophagoscope to differentiate the diverticulum sac from the wall of the hypopharynx at the time of excision, has proven to be the method of choice. The entire procedure is almost bloodless and can be carried out with ease under local anesthesia. Hence, it can be performed with safety on even the very debilitated patients. The danger of secondary stricture is avoided and recurrences are almost unknown when this combined technic is used.

Case: B. B., a 65 year old white man was seen first on December 7, 1951 with the chief complaint of difficulty in swallowing and the regurgitation of previously ingested food. The patient believed his trouble to be due to cancer of the throat. However, he was quite puzzled that he was still alive, as the symptoms were first observed in 1945.

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*Read before the Tennessee Academy of Ophthalmology and Otolaryngology, Knoxville, Tenn., April 7, 1952.

The patient first consulted a physician about his difficulty in 1948. Examination and X-ray studies of the neck were made at that time. However, no diagnosis was established as the X-rays were taken without the use of a barium mixture. The symptoms had become progressively severe, and at the time of my examination this patient could take almost nothing by mouth. There had been several episodes of blood-spitting but none were severe. Considerable weight loss had occurred.

Physical examination revealed a thin, somewhat malnourished appearing 65 year old male. Yet, except for some fullness over the left side of the neck, examination revealed no significant physical findings.

X-ray studies of the chest and neck were negative. However, studies made after the ingestion of a barium mixture revealed a large pulsion type diverticulum arising from the left posterolateral aspect of the hypopharynx.

The patient was admitted to the hospital on December 10, 1951, and prepared for surgical excision of the diverticulum. He was given intravenous glucose, with vitamins—B and C daily. Combiotic, one ampule, was given daily prior to operation. In view of the relatively simple procedure planned, and since a local anesthetic was to be employed, just two days were spent in preparing the patient.

On the day of admission to the hospital, an attempt was made to have the patient swallow a string weighted with small lead shots. However, he was unable to carry the shot beyond the diverticulum and down the esophagus, therefore it was removed. (The presence of a string in the esophagus facilitates the introduction of the esophagoscope at the time of operation. However, with care its absence does not greatly complicate the procedure.)

The operation itself was carried out entirely under a cervical block type anesthesia and 4% cocaine spray to the pharynx.

An incision 8 cm. long along the anterior border of the left sternocleidomastoid muscle was used. (A transverse type incision at the level of the cricoid cartilage was used.)

With this border of the muscle as a guide, the dissection was carried quite readily and almost bloodlessly, down to the posterolateral border of the left lobe of the thyroid gland. The sternocleidomastoid muscle with the underlying carotid sheath and its contents was retracted laterally. The thyroid gland, recurrent laryngeal nerve, larynx and hypopharynx were retracted medially. At this point the diverticulum sac came clearly into view.

The sac was carefully dissected away from surrounding tissue until what appeared to be the neck had been reached. At this point, the operator or endoscopist inserted a standard 9 mm. esophagoscope into the hypopharynx. The sac was carefully outlined and aspirated of all its contents; then the esophagoscope was carefully passed well beyond the neck of the diverticulum and left in that position.

With the esophagoscope in place, the exact neck of the sac was easily isolated and after insertion of several guide sutures, the sac was carefully excised from the hypopharynx. The closure of the defect in the hypopharynx was quite simple and free of danger of encroachment of the lumen of the hypopharynx. However, great care was taken in closure to prevent leakage at this point. A tight closure was obtained by combining a continuous suture of atraumatic intestinal chromic with interrupted sutures of this same type and silk suture material. In this case the absence of significant surrounding tissue with which the closure could be reinforced was met by suturing the posterior capsule of the thyroid gland over the site of closure.

A small rubber dam drain was inserted into the depth of the wound, and as the retractors were removed, there remained little to close other than the skin margins. The esophagoscope was withdrawn and a rubber feeding tube inserted, through the nose and into the esophagus.*

The postoperative course in this case was entirely uneventful. So much so, that at no time did the patient's temperature rise above normal. Tube feedings of glucose water were started after operation and increased to a full, high caloric formula containing vitamins B and C within 24 hours. The drain was removed on the second postoperative day, the sutures on the fifth and the feeding tube on the seventh postoperative day. The patient was discharged on the tenth postoperative day; and while he had no difficulty in swallowing, he was instructed to remain on a very soft, bland diet for at least one month. Periodic follow-ups, with fluoroscopy and X-ray studies of the hypopharynx have been normal.

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Discussion

W. G. KENNON, JR., M.D. (Nashville).

I have enjoyed reading and hearing Dr. Knight's paper, and I have no critical observations to make regarding it. The otolaryngologist sees these cases all too seldomly. They are referred to the general surgeons by internists and general practitioners; yet there is no reason why the otolaryngologist who is qualified to do a laryngectomy cannot perform this relatively simple procedure. No patient who gives a history of symptoms such as Dr. Knight has brought out in his paper should be dismissed without having radiographic studies of the esophagus using barium. I would like to emphasize the following points which Dr. Knight has brought out in his paper:

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*In some cases in which the patient shows signs of discomfort from the prolonged presence of the esophagoscope, it can be removed immediately after the sac is excised. A large rubber catheter passed into the upper esophagus will serve as a suitable aid in closing the defect in the hypopharynx.

1. These lesions should properly be classed as diverticula of the pharynx rather than of the esophagus.
2. The one-stage operation with or without use of the esophagoscope is the treatment of choice.
3. The use of antibiotics post-operatively is an important factor in obtaining a smooth convalescent period without infection or break-down of the site of closure.

The Relation of Pregnancy to Malignancy, D. G. Morton, J. Kansas M. Soc., 52:57A, 1951.

One of the chief hormonal changes occurring in the gravid state is a marked increase in the titer of circulating estrogen. Observations suggest that estrogens exert an effect upon the tissues of the reproductive tract, including the breasts, which makes them more susceptible to the development of cancer. It has not been shown, however, that estrogens ever cause cancer in humans, or for that matter that they even exert a specific accelerating effect upon the growth of an already existing cancer. The acceleration associated with pregnancy may not be a specific effect of the estrogens, but may be due to the increased vascularity of these tissues in pregnancy.

The author discusses briefly a number of practical clinical problems pertaining to the relationship of pregnancy and of estrogens to malignancy.

1. *Cervical cancer in pregnancy.* Such cancers "seem" to grow more rapidly when the patient is pregnant. In general, the rule should be to treat the cancer at once. Sometimes it will be expedient to terminate the pregnancy operatively before starting treatment, though actually the institution of anticancer therapy will usually result in the spontaneous termination of the pregnancy in a short period of time.

The only exception to this rule of immediate treatment should be when the pregnancy has not quite reached the period of viability. In this event it would seem justifiable to defer cancer therapy until viability has been reached and delivery accomplished by the most appropriate means, provided that the delay does not exceed three to four weeks at most. Since the treatment of cervical cancer inevitably results in castration, we as physicians are not placed in the position of having to decide whether or not continued ovarian function would have a deleterious influence.

2. *Breast cancer occurring during pregnancy.* Sometimes pregnancy seems to accelerate the growth of breast cancer. Therapeutic abortion or premature termination of a more advanced pregnancy may often be indicated, but it should never be done with the idea that it will increase the patient's chance of cure. Pregnancy does not make the difference between the existence and the nonexistence of cancer. It is possible, of course, that whatever cancer is present or remains after treatment might be influenced to grow a little faster if the patient is pregnant; sometimes this is important, but not always.

If the patient is far along in her pregnancy, six months or more, termination is rarely indicated. The breast lesion can be treated in the appropriate manner without regard to the pregnancy.

In like manner, the question of preserving ovarian function in a patient with breast cancer may be discussed. Castration will not, on the basis of established facts, increase the patient's chance of cure. It may have an influence upon the rate of growth of cancer which may still be present. If none is present, then it makes no difference whether the patient has or does not have ovarian function, so far as continued existence is concerned. If the patient is young, however, it may make a lot of difference as to how comfortably the patient exists. For these reasons, usually ovarian function should be preserved in young women.

3. *Estrogen therapy after treatment for cancer of the genital tract and breast.* This is a controversial subject. In line with the arguments already advanced with regard to pregnancy and ovarian function, it is quite safe to employ small doses of estrogens in women who have been treated for cancer of the reproductive apparatus, when symptoms cannot be controlled in some other manner. This is a conclusion based upon extensive experience. For years the author has prescribed estrogens as indicated for women seen in a cancer follow-up clinic without ever having had occasion to regret it. When we give comparatively large doses of estrogens to women with advanced breast cancer and often see regression, it seems foolish to withhold the tiny doses necessary to relieve disagreeable menopausal symptoms in patients apparently successfully treated. (Abstracted by Milton Smith Lewis, M.D., Nashville, Tennessee.)

In the smaller communities the part-time anesthetist gives the anesthesia. Here are valuable suggestions for the physician in the role of anesthetist.

SAFE PRACTICES FOR THE PART-TIME ANESTHETIST*

ROBERT H. HARALSON, JR., M.D., Maryville, Tenn.

When one assumes the responsibility of administering an anesthetic he has contracted to provide not only good operating conditions for the surgical procedure, but has obligated himself to conduct the anesthetic in the safest manner possible so as to least embarrass the patients' psychic and physiologic states.

Premedication under average conditions of scheduled surgery is usually adequate, consisting of a barbiturate on the previous night, further barbiturates followed by some drying agent before surgery. The later cases in the operating room schedule are apt to be the poorly premedicated ones. Rarely is there too much elapsed time since premedication, but quite often there has been failure to order the "on call" medication. The maximum effect of morphine or demerol given subcutaneously is rarely obtained in under one hour and atropine and scopolamine reach their maximum effectiveness only after one and one-half hours.[1]

Most often, however, the emergency case offers a very poorly premedicated patient and this with other factors leads to most complications of anesthesia. This may be true also of the child in for tonsillectomy who arrives late on the morning of operation and is rushed to surgery in order to make the schedule deadline.

Artusio and Trousdell[2] in a well controlled study have shown that the ordeal of tonsillectomy in the inadequately premedicated child may result in permanent psychic damage manifested by enuresis, nightmares, behavior problems, etc. Since the tonsillectomy is perhaps the first of several hospital experiences, it behooves the anesthetist to utilize all the methods at hand to prevent psychic trauma. Certainly a moderate dose of basal anesthesia should never be omitted in the child when emergency does not necessitate immediate operation. There usually is still time for intravenous administration of a belladonna drug for drying and for vagal protection and for some intermediate acting barbiturate to take effect.

Even though recognition of the full stomach as an anesthetic hazard is widespread, this condition still remains a problem. The patient who has not eaten for six hours and suffered a Colles fracture five hours prior to its reduction must be considered to have eaten only one hour ago, emptying of the stomach not having taken place since the injury. Obstetrical patients seem always to have a full stomach regardless of time of onset of labor. Consequently aspiration of vomitus is a leading cause in obstetrical deaths.

Weiss,[3] employing a capsule of Evans blue dye administered orally preoperatively to patients for major surgery, found that 25.9 per cent had gastric contents in the pharynx at the end of operation, and of this group 75 per cent had some aspiration into the lungs. Bearing in mind that these were patients moderately well prepared and most of whom did not vomit, it becomes apparent that every pharynx must be cleared during and following anesthesia.

Before beginning any anesthetic the precaution of having a workable suction device present must never be overlooked. No patient should be anesthetized on a table that cannot be tilted. Due to unavailability of equipment, anesthetics in most offices and in patients' rooms are more hazardous than those done in the operating room. The same is true for some special surgical procedures which are usually done in the X-ray department. Provisions for supplying oxygen under pressure and for suctioning the trachea must never be neglected.

The laryngoscope and intratracheal tube are an essential part of the anesthetic equipment and should always be present and the scope in working order. Tracheal intubation is not a difficult technique and can be mastered sufficiently with practice. Children and infants offer some special difficulty because,—(1) the larynx is situated more cephalad than in the adult, (2) the epiglottis is short, stiff and "U" shaped, and (3) the tongue is relatively larger and depresses the epiglottis.[4]

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

Every one administering even an occasional anesthetic should have available a laryngoscope and an assortment of tubes, and by practice acquaint himself with their use. The curved blade MacIntosh laryngoscope is the most generally useful and can be used in nearly all adults and most children and infants. Blind intubation in the newborn is not very accurate and when the occasion arises for intubation it should be done immediately and hence under direct vision.

Choice of agent. There is no one ideal anesthetic agent, and so the agent selected must fulfill as many desirable features as possible, and yet be one with which the anesthetist is familiar both as to technique of administration and its pharmacologic properties.

Ethyl ether is the most commonly used agent and has often been said to be the safest agent. Realizing this, let us mention some salient points which can make even this safe agent a deadly one.

Ether's value as an anesthetic agent depends upon its specific depressant action of the cells of the central nervous system. The depression moves from the higher centers to the sensory and then to the motor cortex, to the spinal sensory, spinal motor and reflex centers and to depression of the medullary centers with respiratory failure appearing sometime before cardiac depression.

In spite of the many postulations as to the mechanism of anesthesia, interference with tissue oxidation, either as cause or effect, remains the most obvious mechanism. Quastel has shown that narcotics in brain slices inhibit carbohydrate oxidation and cause narcosis. Courville, a neuropathologist, has made an elaborate study of ether complications and has concluded that all the alleged causes of these complications are in reality associated with hypoxia.

Hypoxia associated with ether anesthesia is a common occurrence with the drop technique. This was not believed to be true until oximeter studies revealed degrees of anoxia short of detectable cyanosis. One should remember too that five grams of reduced hemoglobin is necessary to produce cyanosis detectable to the eye, and hence the severely anemic patient may die of anoxia without ever having shown any cyanosis. In anemic patients one must supply very rich oxygen mixtures, and this is nearly always possible for the concentration of the anesthetic agent can be reduced in proportion to the anemia. Stephens has shown repeatedly a fall in arterial oxygen saturation after moderately long open drop ether technique without oxygen flow.[5]

Faulconer[6] has investigated ether and oxygen tensions beneath the mask in semi-open ether air technique and reports startling results. The act of placing a dry mask over the patient's face reduced the oxygen tension from that of room air (153 mm.) to an average of 123 mm. When ether tensions of anesthetic potency were obtained under an ether mask, oxygen tensions were still further reduced. Continuous oximeter reading showed proportional reductions in arterial blood oxygen saturation.

A flow of as little as 500 cc. of oxygen under the mask prevented the lowering of oxygen tension and maintained blood oxygen saturation. This simple expedient of supplying oxygen during ether anesthesia may suffice to prevent the cortical damage manifested by "ether convulsions," permanent or temporary neurologic or psychiatric phenomena, or in the fortunately infrequent instance, of death of the patient.

There are other features of ethyl ether that should be considered, among them decreased function of liver and adrenals, as well as a suppression of urine due to stimulation of the pituitary gland. When confronted with the jaundiced, the Addisonian, or the nephritic patient, these factors must be remembered.

Pentothal is now universally employed, usually with good results, but it deserves a word of caution. The simplicity of administration and the rapid induction and emergence may lull one into carelessness and into forgetting that there are no minor general anesthetics. True the complications are rare, but pentothal administration should be accompanied by the same precaution as with other agents; that is premedication, availability of suction apparatus and a supply of oxygen for manual respiration.

Since more and more surgeons are becoming proficient in the more complicated surgical procedures, and a greater number of extensive operations are being performed outside the larger cities, the part-time anesthetist is being called upon to maintain beter operating conditions with relaxation, and maintenance of circulatory volume, etc., for longer periods of time. With the advent of the curariform drugs relaxation has become readily obtainable without resorting to the depressing depths of anesthesia formerly necessary.

Associated with any agent, except nitrous oxide and ehtylene, there is depression of the sensitivity of the respiratory center to carbon dioxide. The accumulation of carbon dioxide due to lessened respiratory minute volume results in a respiratory acidosis. Carbon dioxide in excess is a narcotic agent and if allowed to persist may manifest its presence by rises in blood pressure, arrythmias followed by depressed respiration, pallor, fall in blood pressure and circulatory collapse. (This is probably the mechanism of so-called "cyclopropane shock.") The accumulation of excessive carbon dioxide may be easily prevented[7] by manually assisted or controlled respiration with closed or semi-closed techniques. The minute volume should at least equal and may exceed that of the unanesthetized state. There are some hazards to controlled respiration such as interference with filling of the right heart, but all anesthetized patients will benefit by the assisted respiration technique. This consists simply of allowing the patient to maintain his own respiratory rate, but by putting slight pressure on the breathing bag near the end of the inspiration one adds a hundred or more cubic centimeters of gaseous exchange. This technique, by hyperventilation, assures an adequate oxygen supply, removes excess carbon dioxide and by keeping all the alveoli expanded, reduces the incidence of atelectasis.

Analeptic drugs such as metrazol, coramine and picrotoxin are almost without usefulness in anesthesia and, in most instances, rather than being beneficial they may increase the demand for oxygen in the central nervous system and precipitate convulsions. The vasopressors epinephrine, ephedrine, vasoxyl, neosynephrine, or similarly acting drug should always be at hand but, except to relieve hypotension from spinal anesthesia, should never be used until it is ascertained that hypoxia or loss of circulating blood volume are not the cause of the hypotension.

The anesthetic explosion is fortunately the least common but is by far the most dramatic of all anesthesia accidents. Because of his association with explosive agents it is the responsibility of the anesthetist to maintain eternal vigil to prevent situations where explosions may occur. The visible sources of ignitions such as cautery, flames and switches can be kept away from explosive mixtures but static sparks, the most frequent cause, are less predictable. Adequate protection is maintained when all objects in the operating room are of equal potential and this can be accomplished by the use of conductive rubber for the gas machine and table mattress, grounded floors, elimination of wool, silk and nylon in the clothing of personnel and maintenance of a high humidity which is in itself a grounding device. The National Fire Protective Association has issued a pamphlet called "Recommended Safe Practices for Hospital Operating Rooms," and this is recommended to all who must concern themselves with explosive anesthetic agents.

Summary

Briefly we have reviewed some of the factors involved in conducting a safe anesthetic. Most of the errors are errors in judgment and rarely the fault of equipment or agent. Judgment can come only from training and experience but can be improved by familiarizing oneself with the pharmacology of the agents he intends to use. The literature on anesthesiology is available in the journals *Anesthesiology* and in *Anesthesia and Analgesia*, and I urge all who devote part of their practice to anesthesia to avail themselves of these helpful journals.

1. Premedication is a "must" to maintain normal psychic and physiologic states.

2. Anesthetics should never be conducted where a tilt table, suction apparatus, laryngoscope and intratracheal tubes, and oxygen for positive pressure administration are not available.

3. Oxygenation with semi-open ether technic can be maintained with 500 cc. oxygen flow under the mask.

4. Hypoxia and hypercarbia can be prevented by manually assisted respiration.

5. The anesthetist should remain continually "explosion conscious."

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Roentgen Aspects of Pulmonary Arteriovenous Fistula. Seaman, W. B., and Goldman, A. Arch. Int. Med., Vol. 89, 1952.

Cyanosis and clubbed fingers associated with polycythemia and a pulmonary murmur are the features of the full blown clinical syndrome of pulmonary arteriovenous fistula. A large proportion of the cases are associated with cutaneous hemangiomata and telangiectasis of an hereditary nature. There are now more than sixty-five proved cases in the medical literature. With the study of more cases it has been found that one or all of the prominent clinical manifestations may be absent and the roentgen appearance may be the only positive sign. Since this anomaly is surgically curable, recognition of the condition is of the utmost importance. Very few cases have been reported in children although it is felt that the lesions are probably overlooked.

The authors describe the roentgen findings in eight cases seen at Washington University School of Medicine during the past ten years. An abnormal pulmonary shadow was demonstrated in every case. The mass is usually lobulated or round and usually seen in the lower lobes. There are two or more linear shadows connecting the mass with the hilum which represent the afferent and efferent blood vessels. Fluoroscopic and kymographic studies are very important in demonstrating the vascular character of the lesion. Valsalva and Muller maneuvers may cause a change in the size of the lesion. Laminagraphic studies were very successfully used by the authors. Cardio-angiography is the final test for proving the vascular nature of the lesions. The authors feel that with the use of conventional roentgenography and laminagraphy a definite diagnosis can be made in a large majority of the cases. However, if surgical treatment is contemplated angiocardiographic studies should be done in every case. This is emphasized as the demonstration of multiple lesions not seen in the conventional methods of study is frequent enough to be important. Resume of the clinical features of their eight cases and discussion of the other reported cases with excellent roentgenographic illustrations are included in the report. (Abstracted for the Middle Tennessee Heart Association by Joseph Ivie, M.D., Nashville.)

The author has attempted to simplify the oft-confusing classification of renal disease, both as to diagnosis and prognosis.

A PATHOPHYSIOLOGIC CORRELATION OF CHRONIC GLOMERULONEPHRITIS*

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I have been given the privilege of discussing nephritis with you. The only reason that I can give for presenting the subject is that it has been a source of stimulating confusion to me for some time.

The study of the kidney has many intriguing ramifications, and the clinician has always been grateful to the physiologist for clarification of renal function. Today the physiologist can give us a microscopic view, so to speak, into the living nephron. He has perfected such intricate studies as filtration rate, filtration fraction, total excretory mass, etc. Nevertheless, it has been observed time and again that it is the consideration of the clinical picture, together with a few simple laboratory tests, that usually make the diagnosis.

It is the purpose of my presentation to attempt a correlation of the pathophysiology of glomerulonephritis so that the physician, with but meager laboratory facilities offered by the smaller communities, can be more certain of his ground as to diagnosis and prognosis. A better knowledge of nephritis will also be of definite help in understanding the other kidney disturbances.

The signs and symptoms of glomerulonephritis simulate many conditions. A glance at Table 1 readily reveals the many diseases which muddle the picture. To make matters a little more difficult, the various signs and symptoms of nephritis itself differ from patient to patient. Some have hypertension, some do not. Some show edema, some do not. Some have uremia, some do not. Some are sick and some are not.

Table 1

PRINCIPAL CAUSES OF KIDNEY DISEASE

1. Benign albuminuria.
2. Nephroses (degenerative).
3. Amyloidosis.
4. Kidney infections: pyelonephritis, pyonephrosis, cortical abscesses and perinephric inflammation.
5. Nephritis (inflammatory).
   a. Diffuse glomerulonephritis.
   b. Focal nephritis.
   c. Acute interstitial nephritis.
6. Allergic disorders: disseminated lupus erythematosis, polyarteritis
7. Renal injury: chemical and metabolic agents, shock.
   a. Mercury, bismuth and sulfonamides.
   b. Nephrocalcinosis and gout.
8. Congenital or acquired malformations: hypoplasia, polycystic disease, tumors and aberrant vessels.
9. Multiple glomerular embolization.
10. Nephrosclerosis.
   a. Essential hypertension.
      (1) Benign.
      (2) Malignant.
   b. Senile arteriosclerotic kidney.
   c. Intercapillary glomerulosclerosis.

I must apologize for mentioning the normal physiology of urine formation to this gathering. (Fig. 1.) Nevertheless, there may be one or two points that need emphasis. For instance we all know that blood enters the glomular tuft for filtration through the afferent arteriole and leaves by way of the efferent vessel to reach the peritubular capillary network. But we do not always recall that in the event of blockage of the glomerulus, as occurs in nephritis, or in the event of arteriolar spasm as in so-called lower nephron nephrosis, blood entering the kidney may by-pass the glomerular tuft by way of the Isaac-Ludwig preglomerular arterioles and thus reach the peritubular capillary network. Blood may also reach the peritubular space through vessels dipping down from the outer cortex. The kidney has the dual function of clearing the blood of noxious products through its process of glomerular filtration, and of conserving the essential electrolytes through the reabsorption process of the tubular system. It is because of this latter function of

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

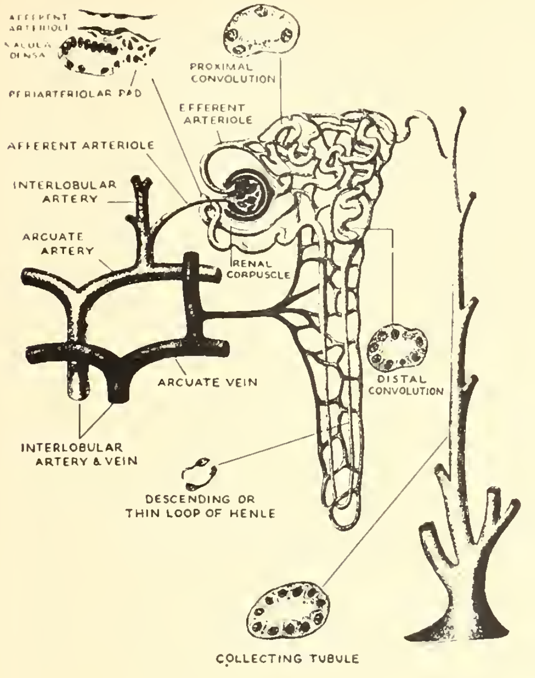

Diagram showing the essential features of a typical nephron in the human kidney.

Fig. 1

Reprinted from, Smith, H.: The Kidney: Structure and Function in Health and Disease, New York, Oxford University Press, 1951, by courtesy of the publishers.

homeostasis that the ability of urine concentration by the kidneys takes on such importance.

Briefly then, blood flowing through the glomerular tuft loses water and chemicals which filter through into the lumen of the tubules. The blood which now leaves the tuft is thus different in character. The post-glomerular blood now has less water, less chemicals, and possesses a relatively greater concentration of proteins. Thus, the post-glomerular blood has an increase in suction power and upon reaching the peritubular capillary system is able to exert this power on the tubules. The tubules in turn reabsorb water and salt from the filtrate inside their lumen. A urine of greater concentration than the original filtrate is the result.

For our purpose, nothing need be said concerning the obligatory reabsorption of glucose and other substances by the proximal tubules, nor need we discuss the differential pressures in the various parts of the nephron. But we do want to say a word about tubular activity. We frequently hear clinicians say that the kidneys are unable to concentrate the urine because the tubules have become involved by disease.

I believe that it can be stated without exception that any nephron capable of filtration has tubules capable of reabsorption. Do not say that any particular renal dysfunction is the fault of the tubules or that it is the fault of the glomeruli. Think of the nephron as a functioning unit. This means that you may simplify your thinking of renal function; there is only one system to be accounted for, the nephron, not two. Yes, the kidney may fail to concentrate, but is not the fault of the tubules. The function of homeostasis is never abandoned by the tubules. You will remember that nephrotic patients with damaged tubules as observed by the pathologist have good kidney concentration. Now, let us review the highlights of the nephritis as they present themselves to the physician.

Acute Glomerulonephritis. (Table 2.) In acute nephritis the pathologic defect is that of a diffuse blockage of the glomerular tufts by vascular spasm, hyaline, and cellular elements. This causes a sharp reduction in the filtrate reaching the tubules. The tubules carry on their function of concentration. The result is that the patient presents an oliguria with urine of high specific gravity.

Table 2

ACUTE GLOMERULONEPHRITIS

Pathological Process	Diffuse Blockade of the Glomerular Tufts by Vascular Spasm, Hyaline and Cellular Elements.
Clinical Picture	Oliguria of High Specific Gravity; Hematuria; Azotemia; Hypertension.

The acute nephritic usually recovers completely. He may, however, expire during his acute attack, or he may die in three to five months after running a severe subacute course. Or, he may be subjected to future acute attacks of varying severity causing him to suffer from chronic glomerulonephritis.

Every patient with *chronic nephritis* should be viewed from the standpoint of the number of nephrons that remain in his kidneys. His clinical picture, as well as his prognosis depends on this relative number of functioning units. Figure 2 presents diagramatically the relationship prognostically of one patient to the next. It also presents the succession of events pathologically and clinically.

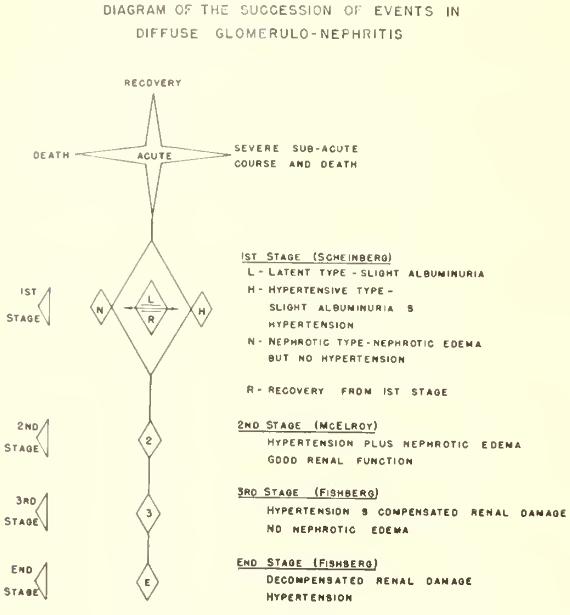
DIAGRAM OF THE SUCCESSION OF EVENTS IN DIFFUSE GLOMERULO-NEPHRITIS
RECOVERY
DEATH
ACUTE
SEVERE SUB-ACUTE COURSE AND DEATH
IST STAGE
N
L
R
H
IST STAGE (SCHEINBERG)
L - LATENT TYPE - SLIGHT ALBUMINURIA
H - HYPERTENSIVE TYPE - SLIGHT ALBUMINURIA & HYPERTENSION
N - NEPHROTIC TYPE - NEPHROTIC EDEMA BUT NO HYPERTENSION
R - RECOVERY FROM IST STAGE
2ND STAGE
2
2ND STAGE (MCELROY)
HYPERTENSION PLUS NEPHROTIC EDEMA GOOD RENAL FUNCTION
3RD STAGE
3
3RD STAGE (FISHBERG)
HYPERTENSION & COMPENSATED RENAL DAMAGE NO NEPHROTIC EDEMA
END STAGE
E
END STAGE (FISHBERG)
DECOMPENSATED RENAL DAMAGE HYPERTENSION

FIG. 2

Chronic nephritis occurs in four major stages,—the first stage presenting three sydromes, and the other stages one sydrome each. Pathologically, these stages differ one from the other by the gradually increasing obliteration of more and more glomeruli as the patient progresses from one stage to the next.

In the first stage of chronic glomerulonephritis, the pathologic process is of minimal glomerular obliteration. There is no renal insufficiency. The patient may show three different clinical pictures.

First Stage Chronic Glomerulonephritis, Latent Type. (Table 3.) If the only residual is that of a relatively few damaged permeable glomerular filters which allow albumin to get into the tubules, the patient presents only a mild albuminuria and he is said to be in the latent stage.

Table 3

FIRST STAGE CHRONIC GLOMERULONEPHRITIS

LATENT TYPE

Pathological Process	Minimal Glomerular Obliteration. Relatively Few Residual Diseased Filters.
Clinical Picture	Mild Albuminuria; Occasional RBC; No Hypertension; No Loss of Concentration.

First Stage Chronic Glomerulonephritis, Nephrotic Type. (Table 4.) If a greater number of filters are left damaged, the loss of protein is much greater and the patient develops a nephrotic picture. Because of relatively few completely obliterated glomeruli, there is no hypertension.

Table 4

FIRST STAGE CHRONIC GLOMERULONEPHRITIS

NEPHROTIC TYPE

Pathological Process	Many Diseased Filters; Relatively Few Obliterated Glomeruli; Tubular Cell Degeneration.
Clinical Picture	Edema, Severe Almubinuria, Lowered Blood Proteins, Reversal A-G Ratio, No Hypertension, Good Concentration, No Azotemia

First Stage Chronic Glomerulonephritis, Hypertensive Type. (Table 5.) If the residual renal damage is such as to leave a fairly good number of obliterated glomeruli plus relatively few glomeruli with diseased filters, the clinical picture is that of some albuminuria plus hypertension.

Table 5

FIRST STAGE CHRONIC GLOMERULONEPHRITIS

HYPERTENSIVE TYPE

Pathological Process	Fair Number of Obliterated Glomeruli; Relatively Few Patent Glomeruli Possessing Diseased Filters.
Clinical Picture	Hypertension Plus Mild Albuminuria; Good Concentration; No Azotemia.

Second Stage Chronic Glomerulonephritis. (Table 6.) In this stage, the patient has been further attacked by nephritis. He has lost more glomeruli by obliteration and has a considerable number of damaged filters permitting a great loss in proteins. The patient here presents the picture of hypertension plus nephrosis. The obliteration of the glomeruli has not blocked a sufficient number of glomeruli to cause renal insufficiency. Therefore, concentration ability is still present.

Table 6

SECOND STAGE CHRONIC GLOMERULONEPHRITIS

Pathological Process	Fair Number of Obliterated Glomeruli; Many Patent Glomeruli with Diseased Filters.
Clinical Picture	Edema; Severe Albuminuria; Lowered Blood Proteins; Reversal of A-G Ratio; Hypertension; Good Concentration; No Azotemia.

Third Stage Chronic Glomerulonephritis (Compensated Renal Insufficiency). (Table 7.) When a patient who is in the second stage showing the picture of hypertension and nephrosis, is further attacked, then more glomeruli are obliterated. When that happens a great number of diseased filters, which had previously been allowing a severe protein loss, no longer function. The albuminuria diminishes in degree. The patient gradually builds up his blood proteins and gradually loses his nephrotic picture. He is no longer edematous and is apparently improved but actually worse. For, by having lost additional functioning glomeruli, he has gone into a form of renal failure. His kidneys cannot concentrate, he has polyuria, but he does not as yet show uremia.

Table 7

END STAGE CHRONIC GLOMERULONEPHRITIS

(Compensated Renal Insufficiency)

Pathological Process	Obliteration of Majority of Glomeruli; Patency of Paraglomerular Vessels; Loss of Gradient Between Peritubular Tissue Fluids and Filtrate.
Clinical Picture	Less Severe Albuminuria; Loss of Concentration; Polyuria; Hypertension; Some Retinopathy; No Azotemia.

With our present knowledge we can account for this loss of concentrating power by the following explanation. With the obliteration of many glomeruli, their corresponding tubules are obliterated. At the same time, blood which normally traverses through afferent and post-glomerular arterioles now reaches the remaining peritubular tissue by way of the extra-glomerular vessels. This blood has not lost any water by filtration for it did not go through the glomerular tuft. It is not dehydrated and its proteins are not concentrated as in normal post glomerular blood. Therefore, it does not have the power of reabsorption. The gradient between the filtrate in the remaining functioning nephrons and the peritubular tissue fluids is almost nil and no exchange of fluid occurs.

End Stage Chronic Glomerulonephritis (Decompensated Renal Insufficiency.) (Table 8.) As the process of glomerular obliteration continues comparatively few glomeruli remain. The patient now has uremia. His urine output is small and it is of a low specific gravity.

Table 8

END STAGE CHRONIC GLOMERULONEPHRITIS

(Decompensated Renal Insufficiency)

Pathological Process	Almost Complete Obliteration of Glomeruli; Loss of Gradient Between Peritubular Tissue Fluids and Filtrate.
Clinical Picture	Oliguria; Less Severe Albuminuria; Hypertension; Loss of Concentration; Azotemia; Retinopathy.

Table 9 is a resume of the various clinical findings. This diagram may be of help in placing the nephritic in his proper stage of his disease.

Not all patients go through all the stages, for the attacks of nephritis are not of the same severity. Thus, the patients present six major syndromes rather than a uniform progressive disease. But by understanding the pathophysiologic process in each case, we can classify each patient as to the severity of his renal ailment, make a more accurate diagnosis and prognosis, and offer more intelligent treatment.

Discussion

DR. S. FRED STRAIN (Memphis): The classification of the nephritides has been of considerable interest to me first as a student, then as intern, and again as medical resident. Several years ago I learned a modification of Volhard and Fahr's classification as taught by my honored and beloved teacher and chief the late Dr. J. B. McElroy. I still think that classification has considerable merit.

Dr. Scheinberg has given us today a simple and practical discussion correlating the pathological physiology of glomerulonephritis with the clinical findings. His outline helps us to explain the alterations of kidney function which can be observed as the disease progresses. It enables us to interpret more accurately the meaning of clinical and labor-

Table 9

CLINICAL FINDINGS IN CHRONIC DIFFUSE GLOMERULONEPHRITIS

	Finding	*Latent First Stage*	*Nephrotic First Stage*	*H-tensive First Stage*	*Second Stage*	*Third Stage*	*End Stage*
1	Albuminuria	Slight	Heavy	Slight	Heavy	Moderate	Moderate
2	Hematuria	Present or absent	Same	Same	Same	Same	Same
3	Urine sp. gr.	Normal	Normal	Normal	Normal	Low	Low
4	Urine volume	Normal	Normal or decreased	Normal	Normal or decreased	Increased	Much decreased
5	Hypertension	Absent	Absent	Present	Present	Present	Present
6	Nephrotic edema	Absent	Present	Absent	Present	Absent	Absent
7	Serum protein	Normal	Low	Normal	Low	Normal	Normal
8	Alb.-Glob. ratio	Normal	Normal or reversed	Normal	Normal or reversed	Normal	Normal
9	Serum nitrogen	Normal	Normal	Normal	Normal	Normal	Increased
10	Serum chloride	Normal	Normal or increased	Normal	Normal or increased	Normal	Normal or increased
11	Serum cholesterol	Normal	Increased	Normal	Increased	Normal	Normal or decreased
12	Urine conc. tests	Normal	Normal	Normal	Normal	Impaired	Impaired
13	Urea clearance	Normal	Normal	Normal	Normal	Impaired	Impaired
14	Cardiac hypertrophy	Absent	Absent	Absent or slight	Usually present	Present	Present
15	Albuminuric retintis	Absent	Absent	Absent	Usually absent	Present or absent	Usually present

An acute exacerbation of nephritis superimposed on any stage may alter the above findings.

atory studies in our nephritic patients and, therefore, makes possible more accurate evaluation of the clinical picture for the purpose of diagnosis, prognosis and treatment.

The end results of many diseases of the kidney are the same, namely, the destruction of functioning units and consequent impairment of renal function. It is well known that two normal kidneys contain many more functional units than are needed in the important role they play in homeostasis and considerable damage, therefore, must occur before evidence of impaired function can be detected. After the diagnosis of glomerulonephritis is definitely established, the type and stage of the disease can be ascertained by several relatively simple procedures:

1. The degree of albuminuria. The diagnosis of nephritis, either acute or chronic, is hardly justified without the presence of albumin in the urine. The amount varies with the stage of disease as has been indicated by Dr Scheinberg.

2. The specific gravity of the urine. One of the earliest evidences of impairment of renal function is the finding of the inability to concentrate. Too much emphasis cannot be placed on the importance of this simple test.

3. The examination of the urinary sediments for red blood cells, pus cells, and cast.

4. The phenolsulphonthalein, or PSP test. This test is another simple means for testing the efficacy of glomerual filtration.

5. The estimation of the volume of urine excreted. This must be correlated with the degree of hydration of the patient.

6. Non-protein nigtrogen determination. While this test is a little more complicated than those mentioned above, it should be included, if at all possible. Nitrogen retention indicates rather extensive damage to the kidneys and is of extreme importance in aiding the clinician to evaluate the degree of kidney damage.

These studies must all be considered with the symptoms and physical signs for proper evaluation. Knowledge of the stage of nephritis is essential for intelligent treatment. While our treatment at best is far from satisfactory at present, much can be done at times to maintain compensation of renal function, and thus to prolong the life of unfortunate victims of nephritis I think that Dr. Scheinberg has made a real contribution to the subject in the presentation which he has given us today.

PREFERRED PROCEDURES

As diseases become more rare because of modern therapy in infections, the physician tends to forget them in differential diagnosis. This essay reminds us of the clinical picture in acute infectious hematogenous osteomyelitis. The author also outlines its proper management.

ACUTE INFECTIOUS HEMATOGENOUS OSTEOMYELITIS

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Only ten years ago this disease in acute or chronic form was responsible for approximately 0.5 per cent of all general hospital admissions, and a much higher per cent of the admissions to children's and orthopedic hospitals. Within the past decade treatment has been so revolutionized that this form of osteomyelitis is now rarely encountered in surgical practices.

Hematogenous osteomyelitis may be regarded as the bone phase of bacteremia or pyemia. The exciting organism is usually a staphylococcus or a streptococcus which has entered the blood stream through a cutaneous wound or through the respiratory passages. Frequently the site of entry cannot be determined. Local trauma may play a predisposing part in the localization of bone infection. The long bones are predominately affected, those of the lower extremities out-numbering the long bones of the upper extremities more than three to one. The distal end of the femur and the proximal end of the tibia are those most frequently involved. The initial bone lesion is usually found in the metaphysis, probably because the slow flow of blood within the capillary end loops favors lodgment of bacterial emboli. With lodgment of the infected embolus, abscess formation is followed early by thrombosis of adjoining vessels and necrosis of bone. Following rupture of the periosteal tube a soft tissue abscess forms. Because of circulatory damage to the affected bone, sequestration with involucrum formation later develop as part of the repair process. If infection occurs within a bone whose epiphysis is in part intra-articular, extension of infection into the adjacent joint occurs. Emboli may lodge elsewhere in the body with formation of abscesses at the site of lodgment. Although predominantly a disease of childhood, it may occur at any age. The disease is infrequent in Negroes. In infants under two years of age the invading organism is usually a streptococcus and sequestration frequently does not occur. During adolescence and following closure of the epiphyses the adult type of infection is frequently found, which is characterized by a rather insidious onset, localization of the infection within the shaft of the bone, a milder course of the disease, and frequently by healing without sequestration.

Clinical symptoms vary widely in accordance with the severity and persistence of the blood stream and local infection. Premonitory signs consisting of malaise, anorexia or chill may occur for a period of 12 hours to four days before the onset of pyrexia. The toxemia varies widely from mild manifestations to overwhelming infection with delirium and early death. The local findings in the extremity consist of pain, with splinting of the adjacent joint by muscle spasm. Slight local swelling usually occurs after 24 hours and hyperemia appears after 1 to 3 days. Fluctuation rarely occurs before 3 to 10 days following the onset. The regional lymph glands are usually enlarged and tender.

Diagnosis in the early stage of the disease must be made solely from the physical findings of pyrexia, a localized bone "pressure-pain" point adjacent to the metaphysis and a negative X-ray. Unless the adjacent joint is involved it may gently moved without increasing pain and joint swelling will be absent. X-ray findings are absent until 8 to 14 days following the onset of the disease. The first finding is a localized area of decreased density adjoining the epiphysis. The blood picture is that of acute infection. Early blood culture frequently shows growth. The most important single factor in making the correct diagnosis in the early stage of acute hematogenous osteomyelitis is to consider the possibility of osteomyelitis and to remember that early X-ray findings are negative. All too often the disease is not considered at the time of initial examination and much valuable therapeutic time is lost.

Differential diagnosis must include the consideration of cellulitis, in which localized swelling and hyperemia are usually early and prominent findings, and bone pain on pressure is usually absent. Acute rheumatic fever is characterized by migratory joint symptoms and early cardiac involvement. In this disease local pain, swelling and pyrexia are usually early and concurrent. Tuberculous epiphysitis is characterized by an insidious onset and early muscle spasm on passive motion of the joint. Luetic oteochondritis does not present the acute onset nor rapid progress of acute hematogenous osteomyelitis. Additional stigmata are frequently present, serology is usually positive. In typhoid fever the onset is usually insidious without localization to a single bone, although typhoid osteomyelitis may later occur. Scurvy is differentiated by history of inadequate diet, frequent bleeding of the gums, and by involvement of the periosteum of the shaft of the long bones without the acute symptoms of osteomyelitis. Osteogenic sarcoma and other malignancies are characterized by a gradual onset without acute local manifestations, although the differential diagnosis of Ewing's tumor may prove particularly difficult as pyrexia and leukocytosis frequently accompany this disease. X-ray differentiation between hematogenous osteomyelitis, lues and malignancy may be extremely difficult or impossible.

Until the advent of antibiotics the treatment of acute hematogenous osteomyelitis was surgical, consisting of drainage of the area of bone infection, splinting of the part to prevent pathologic fracture, and symptomatic treatment of the toxemia, often with repeated small blood transfusions. Severe prostration, long continued drainage, and sequestration were frequent. The mortality rate was in excess of 10 per cent. Comparison of series of cases treated by surgery with those treated by antibiotics is most gratifying.* Treatment of acute osteomyelitis has now passed from the surgeon to the pediatrician and the internist. Adequate early treatment with antibiotics usually prevents sequestrum formation and the mortality has been reduced to a near vanishing point. As a result of the current widespread use of antibiotics in the early treatment of acute infections it is probable that the localization of infection within bone is frequently aborted.

Penicillin remains the antibiotic of choice although, with the development of penicillin resistant strains of pyogenic organisms and the wide spectrum of organisms affected by aureomycin and terramycin, it is likely that these and possibly other antibiotics will prove even more effective therapeutic agents. It is recommended that the antibiotic be given in adequate dosages and continued for a period of approximately one month, to best insure sterilization within the area of bone infection. In order that the course of the disease may be observed within the affected extremity splints are preferred to casts early in the disease. General treatment is governed by the degree of toxemia. Repeated small blood transfusions are of value. Soft tissue abscesses, if they develop, should be aspirated to determine the causative organism and its antibiotic sensitivity. Aspiration is preferred to incision and drainage as the likelihood of secondary infection is thereby decreased. If sequestra develop, secure splinting of the extremity is necessary to decrease the danger of pathologic fracture. Continuation of antibiotic therapy and splinting often result in revascularization of sequestra, frequently a very striking feature of antibiotic therapy. In the event that sequestra persist and draining sinuses develop, surgical intervention consisting of sequestrectomy with wide saucerization to adjoining normal bone, primary closure of the overlying soft tissues, and further antibiotic therapy are indicated as effective methods of arresting the disease.

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*Robertson, C.: Acute Infectious Hematogenous Osteomyelitis. American Academy of Orthopedic Surgeons, Instructional Course Lectures. 5:136, 1948.

The possibility of relighting of infection within the bone must be considered for a period of many years following apparent arrest.

Parental Nutrition in Elderly Surgical Patients. Rice, C. O., and Strickler, J. H. Geriatrics, 7: 232, 1952.

In view of the gradually accumulating material on nutrition in the aged, certain facts are now available which may be used by the physician in maintaining parenterally an adequate nutritional state in elderly patients (65 years or more of age). These individuals have a decrease in protein synthesis, a greater protein requirement, a less efficient carbohydrate metabolism and a retarded rate of oxidation in their tissues. All of these facts influence the materials necessary for supporting the geriatric surgical patient parenterally.

Studies carried out at the University of Minnesota Hospitals showed that elderly patients could be mainained simultaneously in caloric, nutritional, water, nitrogen and electrolyte balances by the use of a mixture of invert sugar, protein hydrolysate, ethanol, electrolytes and vitamins. A series of patients maintained on such a mixture was followed during the pre- and post-operative periods, and intensive studies were carried out on blood sugar levels, nitrogen balance, sodium and potassium excretions, blood alcohols and blood electrolytes. It was found that the group of patients maintained in adequate nutritional status by the mixture described had an incidence of various postoperative complications of 17% as against 37% in the inadequately nourished group. They found no contraindications to the administration of the mixture and no unfavorable side reactions were noted.

The material described contains 120 grams of invert sugar, 60 grams of protein hydrolysate, 40 grams of ethanol, 1,000 cc. of distilled water, 27 mEq./1 of potassium and 120 mEq/1 of sodium. To this preparation was added one ampoule of Pan-Vitamins (Baxter Laboratories, Inc.) during each 24 hour period. The solution was administered intravenously through a polyethlene catheter although a needle may be used and was used and was given slowly around the clock. (Abstracted by B. F. Byrd, Jr., M.D., Nashville.)

STAFF CONFERENCE

The Division of Pediatrics, University of Tennessee College of Medicine*

DR. FONTAINE S. HILL: The case to be presented is that of jaundice in a newborn infant, which will serve to introduce the subject of neonatal icterus. Jaundice of the newborn infant poses one of the most common and interesting problems confronting the physician. Fortunately, it is usually due to physiological processes, but when it is of a pathologic nature early diagnosis is essential in order to achieve successful therapeutic results. Hence, all physicians caring for infants in the neonatal period should familiarize themselves with conditions which produce icterus as a principal manifestation. Commonly encountered causes of jaundice in the newborn infant are not numerous. Therefore, a correct diagnosis can be made with a fairly high degree of accuracy, provided one employs a rational approach to the problem. Obviously, cases of unusual etiology pose more diagnostic difficulties.

Dr. Albert Hand will present the clinical history and surgical findings in a case of neonatal jaundice.

Case Report

DR. ALBERT M. HAND: *History.* J. E. M., a colored male, was born at the John Gaston Hospital on June 6, 1948, and was discharged on June 9, 1948, apparently well. The birth weight was 8 pounds and 3 ounces. Primary respirations at birth were normal. Complete physical examination at one day of age was negative. The infant was breast fed. He had a mild diarrhea but did not require treatment at one week of age. At three weeks of age the infant was taken to another clinic because of golden yellow urine and yellow eyes. He was hospitalized for icterus. a persistently distended abdomen and yellow urine. The infant had suffered no recent diarrhea, was not constipated, and had no vomiting or fever. He had been having one *yellow* formed stool daily. passed without difficulty.

The family history was negative for syphilis. Physical examination revealed an active, jaundiced, colored male infant, in no distress. Weight was 11 pounds and 4 ounces. Temperature was 98.0° rectally. The skin was yellow and no purpura was evident. The abdomen was protuberant and rounded.

The liver, firm and tender, was palpable 10 cm. below the right costal margin. No other abdominal masses were found. Lymphadenopathy was not present. The spleen was not felt.

Laboratory Examinations.

A. *Hemograms:*

	Aug. 10	Aug. 15	Aug. 30	Sept. 2
Hg.	10.5 Gm.	10	9.0	9.5
RBC	2,950,000	3,350,000	4,430,000	2,740,000

The WBC was 11,200 with a differential count of neutrophytes 3%, segmented neutrophiles 20%, lymphocytes 71% and monocytes 6%.

B. *Urine:* On August 10, the urine was yellow in color; had a pH of .45; was negative for albumin and sugar. Microscopically, 1 red blood cell and 1 white blood cell per high power field were found and an occasional granular cast. On August 12, the test for urinary urobilinogen was negative: the urinary bilirubin (methylene blue method—10 cc. urine plus one drop methylene blue) gave a green color, and three more drops of methylene blue turned the urine blue again. Studies showed an absence of urobilinogen and bilirubin.

C. *Additional blood studies.* On August 10, the sickle cell test was negative immediately and after 24 hours. The Kahn was negative.

Reticulocyte count: 0.1% per 1,000 cells counted. (Normal.)

Total serum protien: 6.7 grams per 100 cc.; albumin and globulin fractions were not determined because the blood was hemolyzed.

Sedimentation rate: 18 mm. in 1 hour, corrected; hematocrit 26%.

D. *Serum Bilirubin* in mg. per 100 cc.

	Aug. 10	Aug. 12	Aug. 28
1 minute	7.5	6.9	1.4
Total	15.8	15.1	2.4

(Normal bilirubin in the serum: from 0.25 to 0.75 mg. %; concentrations above 2.0 mg. % are usually associated with clinical icterus.)

E. *Prothrombin Time and Concentrations:*

	Aug. 10	Aug. 20
Control	12.3 sec.	12.3 sec.
Patient	15.0 sec.	16.3 sec.
Percentage	68%	45%

F. *Red Cell Fragility* (Aug. 12):

	Hemolysis began	Hemolysis complete
Control:	0.50% saline	0.34% saline
Patient:	0.40% saline	0.26% saline (considered normal)

G. *Bleeding time and clotting time* (Aug. 20):

Bleeding—2 minutes (normal).

Clotting—4.5 minutes (normal).

H. *Roentgenographic Examination on Aug. 10:* "The liver and spleen are enlarged. Considerable gaseous distension is noted. The cause of the enlargement is not obvious. Examination of the left arm and right leg reveals no evidence of congenital lues."

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Progress in Hospital. Since the infant's clinical and laboratory findings were compatible with obstructive jaundice, operation was performed on August 20, 1848, by Drs. Charles B. Olim and Robert Newman. Vitamin K was given parenterally before operation. A right paramedian incision was employed and was extended from the right costal margin almost to the symphysis pubis. The liver was large, extended below the umbilicus, and appeared moderately cirrhotic. A large choledochal cyst, the size of a tennis ball, was located on the undersurface of the right lobe of the liver. The gall bladder was moderately enlarged, but not distended. Both the gall bladder and cystic duct extended over the surface of the cystic mass. Green bile was aspirated from the cyst. A choledochojejunostomy was performed between the left mid-margin of the cyst and the jejunum, immediately below the ligament of Treitz.

Postoperative Course. Wangensteen suction was begun immediately after surgery and continued for 24 hours. Gastric suction was employed intermittently for another 24 hours. By the second postoperative day the infant tolerated glucose water orally. On the afternoon of the second and third postoperative days the temperature rose to 104 degrees, and there was an intermittent but decreasing fever for 10 days. Penicillin and oxygen were employed. The infant was discharged three weeks after the operation. He grew normally, gained well and in every respect seemed to be a normal infant.

DR. HILL: *Physiological icterus of the newborn* is observed in more than fifty per cent of normal infants. It usually appears by the third or fourth day after birth and ordinarily is not grossly visible after the infant is seven to ten days of age. Premature infants tend to have physiological icterus which is more pronounced and more prolonged than that seen in full-term infants. This type of jaundice is due to two factors: (1) postnatal destruction of red blood cells which accompanies extra-uterine respiration, a more efficient method of oxygenation than the placenta-umbilical cord system; and (2) immaturity of the liver during the neonatal period. In the early days after birth, the liver is unable to cope with the increased load of bilirubin which results from excessive breakdown of erythrocytes. That liver function becomes more efficient in the second week of life is evidenced by the fact that at this time the total serum bilirubin is decreased. Although bilirubin has continued to be released through destruction of red cells, the liver is now able to eliminate the pigment load and jaundice disappears. There are no symptoms referable to this type of jaundice except when it is unusually intense, at which time the infant may be somewhat apathetic and nurse poorly.

Sepsis of the newborn is of two types: (1) bacterial and (2) spirochetal. In bacterial sepsis the most commonly encountered organisms are staphylococci, streptococci and colon bacilli. There is marked tendency to multiple abscess formation with evidences of local inflammation. Presence of pyogenic skin infection or umbilical inflammation may indicate the invasion pathway. There is usually some fever but not of high degree, and it may even be absent. Anorexia, listlessness, loss of weight, twitchings and convulsions may occur. The onset of these is usually towards the end of the first week. In many instances, jaundice and hemorrhagic manifestations follow. Splenomegaly is a fairly constant finding. Death may occur early as the result of a fulminating infection, or the illness may be protracted for several weeks. In recent years intensive administration of antibiotics and sulfonamides, as well as blood transfusion, has improved prognosis.

Spirochetal sepsis is a manifestation of congenital syphilis. The widespread signs and symptoms of this condition are due to septicemia, just as in bacterial sepsis. If the infection is severe, symptoms may occur at birth but usually the onset is delayed until after the second week of life. Therefore, one would not expect to observe jaundice during the first few days. Infants with congenital syphilis exhibit the same general symptoms as those with bacterial septicemia. In addition, such findings as bloody mucopurulent nasal discharge, maculopapular skin lesions, hepatosplenomegaly, edema, pseudoparalysis and osteochondritis may lead to the diagnosis.

Erythroblastosis fetalis (hemolytic disease of the newborn) is one of the major causes of jaundice in the newborn infant. It should be thought of constantly, since treatment has become increasingly successful in recent years. Erythroblastosis is due to iso-immunization of the mother to the Rh factor or to the major blood group factors, A and B. The resultant antibodies cross the placenta to destroy the red cells of the fetus. Clinical manifestations of the two types are essentially the same except that A-B isoimmunization tends to be milder. Jaundice is an early sign, occurring within one to two hours after birth up to several days later, depending on the severity of the case. Anemia associated with pallor, cyanosis, edema and hepatosplenomegaly are usually observed. Not only is jaundice the most common symptom but it is of special significance in erythroblastosis, since it is related to the occurrence of kernicterus, the most important cause of death or neurological sequelae. Approximately 15 per cent of all infants with erythroblastosis develop kernicterus if treated inadequately. Of these, 70 per cent die and most of the remainder have subsequent motor disability, mental deficiency or convulsive seizures.

Kernicterus is more frequent in premature male infants. It develops more often in infants with little or no anemia than in babies with marked anemia at birth. Erythroblastotic babies destined to develop kernicterus show evidence of it during the first five days. Initial symptoms usually appear late in the second day or early in the third day. Symptoms include decrease in alertness, followed by anorexia, vomiting and a tendency to opisthotonus. Convulsions and loss of the Moro reflex are common. Death often ensues within 24 to 48 hours.

Since kernicterus is especially frequent in premature babies, avoidance of prematurity is the most important preventive measure. In addition, early and judicious use of exchange transfusion is of utmost importance.

Congenital obstruction of bile ducts usually consists of atresia of the duct system. However, varied defects may occur, such as absence of parts, presence of a fibrous cord in place of the normal structure, or a choledochal cept. All newborn infants who have prolongation of what is apparently physiological icterus should be suspected of having bile duct obstruction, especially if jaundice steadily increases and the stools become very pale in color. Early, there is hepatomegaly and usually splenomegaly, but if diagnosis and surgical intervention are long delayed, cirrhosis ultimately ensues and the liver is no longer palpable. However, diagnosis is established long before this occurs and the large hard liver is usually easily palpable for many months. There is usually no marked retardation of physical development until the second six months of life. Other clinical manifestations are referable to hepatic changes and depend on the amount of liver damage. Unfortunately, more than three-fourths of these patients have anomalies of the bile ducts which are not amenable to surgical correction.

Infectious hepatitis has been reported with increasing frequency in the neonatal period. Williams and Gaber reported the case of an eleven day old infant who expired with a fulminating form of hepatitis. We have observed a newborn infant who was admitted on the tenth day of life with hemorrhagic manifestations and jaundice. He went through a phase when his laboratory findings were compatible with hepatocellular and obstructive jaundice, but these returned to normal, and he became free of icterus in about three months. At present he is doing well. Ordinarily, infectious hepatitis is milder in infants and children but severe manifestations may occur, especially in newborn infants. Our patient had evidence of marked hepatic involvement which eventually subsided, a course one would expect in infectious hepatitis.

Toxoplasmosis is a protozoan disease which occurs most frequently in young infants as an ordinarily fatal involvement of the central nervous system. Occasionally, visceral involvement dominates the clinical picture. Neonatal toxoplasmosis is characterized by internal hydrocephalus, "dunce-cap" calcifications of the brain, convulsions or spacticity and chorioretinitis. Other findings are jaundice, hepatosplenomegaly, interstitial pneumonia and myocarditis. It is interesting to note that mothers of infants with this disease have no clinical manifestations of invasion by the parasite and that subsequent pregnancies do not produce affected infants. Prognosis is universally poor. Psychomotor and visual disturbances may occur as residual effects.

Galactosemia is a rare disturbance of metabolism in which there is inability to break down galactose. This condition is also known as "galactose diabetes," since it is characterized by galactosuria and hypergalactosemia. Infants with galactosemia are most frequently thought to be feeding problems because of failure to do well when offered various formulas. Hepatomegaly, jaundice, congenital cataracts and mental retardation are other features which may appear. Urinalysis reveals a positive test for sugar. Special testing is necessary to determine that it is galactose. The child's nutritional status may be improved by eliminating milk from the diet. Doctor Arliss Tuttle will discuss laboratory findings in various types of jaundice in the newborn infant.

DR. TUTTLE: There are many laboratory procedures which will give valuable information as to the type and etiology of jaundice in the neonatal period. Decision as to which of these to apply must be governed by the clinical picture in each individual case. It is usually unnecessary and impractical to subject a newborn infant to the entire gamut of tests and in many instances the intelligent application of only a few of the simpler procedures will provide the necessary information for diagnosis.

Accurate interpretation of the results of blood, urine and stool analyses for the various pigments formed as a consequence of the breakdown of hemoglobin necessitates an understanding of at least the fundamentals of formation and excretion of these pigments. Reducing the explanation of these principles to the bare essentials, the following is the generally accepted conception: as erythrocytes are destroyed intravascularly or in the reticulo-endothelial system, hemoglobin is released which is converted to bilirubin-globin, a combination of the pigment bilirubin with the large protein molecule, globin. Bilirubin-globin is carried by the circulatory system to the liver where it is converted to sodium bilirubinate or bilirubin, the latter terms being used interchangeably. Bilirubin is excreted by way of the biliary tract to the intestine where it is converted to urobilinogen and excreted in the stools as oxidized urobilinogen or urobilin. A part of the urobilinogen is absorbed from the gastro-intestinal tract and is carried by the circulatory system to the liver and excreted. The relatively small size of the urobilinogen molecule permits it to pass the barrier in the glomerulus of the kidney, however, so that a small amount is excreted in the urine normally. If bilirubin is released into the general circulation rather than excreted in the bile, it may also appear in the urine. Bilirubin-globin, because of its large molecular size, does not pass through the glomerular filter into the urine. The van den Bergh test gives information as to the total and relative amounts of bilirubin-globin and bilirubin in the serum, the serum level of bilirubin-globin being revealed by the indirect or delayed van den Bergh and the level of bilirubin by the direct or immediate van den Bergh.

I should like to define retention and regurgitation jaundice in terms of laboratory tests so that these terms may be used throughout the discussion. Retention jaundice, due to excessive erythrocyte destruction with the formation of large amounts of bilirubin-globin, or to a functionally subnormal liver which is unable to metabolize and excrete the normal load of bilirubin-globin, is characterized by an increased indirect or delayed van den Bergh, increased urine urobilinogen except in cases of constitutional hepatic dysfunction (mild liver damage without hepatocellular necrosis), and normal urine bilirubin. Regurgitation jaundice, due to mechanical obstruction in the hepatic or extrahepatic duct system or to necrosis of liver cells is characterized by an increase in the direct or immediate van den Bergh although the indirect is also elevated to a lesser degree, increased urine bilirubin and reduced or absent urine and fecal urobilinogen. Details of the technique and significance of these determinations as well as normal values for each determination in children may be found in articles on the subject by Rich or in most standard texts of pediatrics.

In cases where there is questionable icterus or in which recognition of sub-clinical icterus is important, the icteric index may prove valuable as a screening test.

Specific metabolic liver function tests such as bromsulfalein and hippuric acid tests, cephalin-cholesterol flocculation, thymol turbidity and galactose tolerance test may be used to differentiate regurgitant jaundice due to obstruction within the duct system from that due to destruction of liver cells, the latter causing a more severe impairment of liver function. It is true, however, that in prolonged jaundice due to obstruction in the duct system and even in retention jaundice due to rapid and excessive red cell hemolysis, some degree of liver damage results, as evidenced by interference in specific metabolic function. The prothrombin time should be determined in *all* cases of jaundice even though it is believed that there has been no specific liver damage which could lead to hypoprothrombinemia. The importance of bile in the absorption of the fat soluble vitamins must be remembered, and in cases of biliary tract obstruction the absorption of vitamin K may be interfered with to the extent that deficient prothrombin formation results.

Let us now classify the specific entities mentioned by Dr. Hill as to type jaundice produced (i.e., retention or regurgitation) and discuss briefly the laboratory determinations which will be most useful in each condition. Considering first those conditions in which the jaundice is primarily of the retention type, physiologic icterus of the newborn with increased serum bilirubin up to 5 mg. % is the result of a temporary inadequacy of liver function and possibly an increase in erythrocyte destruction during the first few days of life. Anemia does not develop and the serum hyperbilirubinemia is transient, returning to normal by the seventh day of life.

The second cause of retention jaundice is neonatal sepsis, a condition in which the importance of bacteriologic diagnosis overshadows that of specific liver function studies, particularly early in the disease. The most common offending organisms are those which can be cultured from peripheral blood and identified by usual culture methods. If possible, specific drug sensitivity tests should also be performed in order to use antibiotic therapy more effectively. In addition to repeated blood cultures, cultures should also be taken from any possible site of entry such as the umbilicus or cuts or abrasions of the skin, especially if there is a local lesion suggestive of infection. Rarely does the central nervous system escape infection in sepsis neonatorum and for this reason it is advisable to examine and culture the spinal fluid. There is considerable variability in leucocyte response. Although polymorphonuclear leucocytosis is said to be the most common finding, lymphocytosis may occur and in some cases there may be a normal or reduced leucocyte count. The icterus which develops is predominantly of the retention type due to excessive hemolysis although hepatocellular damage caused by infection may cause some regurgitation.

A third condition producing retention jaundice is erythroblastosis fetalis due to Rh iso-immunization or to AB-O incompatibility. The icterus is of varying degrees of severity, usually pronounced, with the serum bilirubin ranging from 10 to as high as 60 mg. per cent. Jaundice early in the course of the disease is due to excessive red blood cell hemolysis. Later, however, liver cell necrosis may lead to regurgitation with the result that jaundice is due to a combination of retention and regurgitation. Prothrombin time is frequently prolonged and the platelet count reduced, causing prolonged bleeding and clotting times. Anemia is prominent, appearing on the first day of life in the severe cases and advancing according to the severity of the disease, the hemoglobin concentration sometimes decreasing as much as 2 or 3 Gm. % in a 12 hour period. Nucleated erythrocytes, normoblasts and erythroblasts are present in the peripheral blood and there is a leucocytosis. In suspected cases, routine blood typing and Rh determination should be done on both mother and infant and in addition, examination of mother's and infant's serum for anti-Rh agglutinins may be done when there remains some question of diagnosis.

I should like to mention the Coombs test in some detail since there exists considerable confusion as to its significance. In the direct Coombs test, the infant's red cells are washed and treated with Coombs serum which is rabbit's serum obtained after injecting human serum globulin into the animal. Coombs serum will cause agglutination of human red cells which have been coated with incomplete or blocking anti-Rh antibodies. A positive test indicates that.

the mother has produced anti-Rh antibodies which have been transferred to the infant. The strength of the reaction does not necessarily have any direct relation to the degree of severity of the hemolytic process, nor to the likelihood of development of kernicterus. A negative Coombs test may be associated with kernicterus and a strongly positive Coombs test may be found in cases with no clinical evidence of erythroblastosis fetalis. Although the pathogenesis of kernicterus is not as yet well known, it rarely develops when the serum bilirubin is less than 15 mg. % whereas it frequently develops when the serum bilirubin is 40 mg. % or higher.

In the fourth group I will include other types of hemolytic anemias, all of which produce retention jaundice primarily, and are rare in the newborn period. In congenital hemolytic anemia the erythrocyte fragility test in hypotonic saline will reveal increased fragility. Hemolytic crises in sickle cell disease are rare in the newborn period, due presumably to the relatively high per cent of fetal hemoglobin present and the low per cent of sickle type hemoglobin. Methemoglobin formation may be accompanied by hemolytic anemia and jaundice in cases of analine dye poisoning.

Chronic galactosuria may produce icterus during the neonatal period which may be either the retention or regurgitation type and is accompanied by a severe anemia. The principal diagnostic laboratory procedure is the phenylhydrazine test for galactose in the urine.

Features of congenital toxoplasmosis other than jaundice usually call attention to this possibility. Laboratory aids in diagnosis include specific complement fixation and dye tests.

We now come to the group of conditions which produce predominantly regurgitation type jaundice. The first to be considered is obstruction of the biliary tract. Severity of the jaundice is sometimes not accurately reflected by the degree of elevation of the serum bilirubin since much of the retained pigment is due to biliverdin. Bile salts do not reach the intestine so that clay colored stools result. The stool may be colored with bile pigments from intestinal secretions as the icterus becomes more pronounced.

Jaundice in infectious hepatitis is of the regurgitation type early in the disease with increased direct van den Bergh and increased urine bilirubin. At the same time, however, the liver is unable to excrete efficiently urobilinogen absorbed from the intestine and the urine urobilinogen is also increased. As the disease progresses both the direct and the indirect van den Bergh are elevated and urobilinogen disappears from the urine, the latter occuring concomitantly with the disappearance of urobilinogen from the stool. Coincidental with the subsidence of jaundice is the resumption of secretion of bile by the liver and the formation and partial reabsorption of urobilinogen from the intestine. Continued inability of the liver to completely excrete the reabsorbed urobilinogen results in the reappearance of large amounts of urobilinogen in the urine. By this time, repair of damaged liver cells has advanced far enough that the urine bilirubin begins to return to normal and the van den Bergh becomes indirect, indicating functional liver impairment without cellular necrosis. Occasionally during the height of the disease, interference in carbohydrate metabolism is reflected by hypoglycemia and acetonuria. The esterified fraction of serum cholesterol is usually reduced, thymol turbidity and cephalin flocculation tests are strongly positive and the serum gamma globulin level is elevated. Erythrocyte sedimentation rate may be elevated early in the disease but is usually normal or reduced as the disease progresses. Leucocytosis is not prominent except for occasional cases in which there is a monocytosis. In suspected cases, the mother's serum should be examined for subclinical hyperbilirubinemia by van den Bergh or icteric index determination. After disappearance of jaundice, bromsulfalein excretion is a valuable test for determining when liver function has returned to normal. The second entity producing regurgitation jaundice is congenital syphilis which presents a clinical picture closely resembling that of bacterial sepsis, and, in fact, may be complicated by sepsis. Laboratory tests of value in diagnosis are serological tests on both mother and infants (at birth and later), and routine blood analyses which usually show a rather severe anemia with many nucleated red cells and a leucocytosis. Roentgenograms of the long bones will usually show pronounced changes.

Although the results of laboratory procedures help to categorize pathogenesis of jaundice in the case which has been presented, a concise definition is possible only in the light of both clinical and laboratory information. Absence of urobilinogen in the urine indicates that bile is not reaching the intestine in significant amounts while regurgitation of bilirubin is indicated by its presence in the urine. Serum bilirubin and serum bilirubin-globin are elevated since both direct and indirect van den Bergh are increased. As stated above, stools may be yellow in complete biliary tract obstruction when serum pigment levels are high enough for the pigments to be secreted by the intestinal mucuosa, so that the history of yellow stools in this case does not rule out obstructive jaundice. The laboratory findings as presented thus far are compatible with regurgitation jaundice due to extrahepatic obstruction but are also consistent with conditions causing hepatocellular damage such as infectious hepatitis during the phase of intrahepatic obstruction. Tests of liver metabolic function are helpful in cases such as this, the greater degree of interference in specific functions being found in cases where regurgitation is due primarily to necrosis of liver cells rather than to biliary tract obstruction.

A low reticulocyte count and the fact that anemia is not severe mitigate against hemolytic anemia with retention jaundice. Congenital hemolytic icterus is ruled out because of normal erythrocyte fragility. There was some interference in prothrombin formation at the time the second prothrombin time was determined. Hemorrhagic tendencies were not present and rarely are until the prothrombin concentration is 30 per cent of normal or less.

The President's Page

FOUR-WAY ABUSE OF HOSPITAL INSURANCE

Dr. Smith

You recall the Greek Fable of the farmer who killed the Goose that laid the Golden Egg. The Goose which lays Golden Eggs for people who are unprepared to pay unforeseen illness is voluntary hospital surgical, obstetrical and orthopedic health insurance.

The Public Service Committee of our Association has called attention to four ways in which this "Goose" may be killed. It may be killed, or its growth stunted, by the choking hands of the physician, the patient himself, the hospital and the insurance company.

A recent critique published by an authority on hospital insurance said some physicians were guilty of the following abuses:

1. Admittances for purely diagnostic purposes only.

2. X-ray therapy, or physiotherapy treatment which did not really require hospitalization (the so-called convenient cases).

3. Unnecessarily prolonged preoperative medications and treatment, usually done to conform with the physician's operating schedule.

4. Orthopedic patients with prolonged hospital stay, even though they may be ambulatory.

5. Overusage of medications.

This hospital insurance authority pointed the finger at hospitals for these abuses:

1. Late admissions, not allowing work-up on admission day, resulting in an extra day of patient stay.

2. Delay in reporting tests. Sloppy or slow reporting means a delay for one or two days in dismissal of a patient.

3. Excessive drug expense because of poor house orders.

4. Delay due to the bottlenecks in auxiliary services in hospitals, especially during late afternoons and week ends.

5. Routine house orders. Are they really necessary?

Patients, purchasers of hospital insurance, were reported guilty of the following:

1. Insistance upon being taken to the hospital for diagnostic work.

2. The attitude expressed thus "shoot the works, Doctor, I've got hospital insurance."

3. Another version of that attitude, "I've been paying premiums for years and never got a cent out of it. Why can't I go to the hospital just for a rest?"

4. Insistance upon remaining in the hospital, clinging to a room badly needed, after the patient is ready for dismissal.

Insurance companies were said to be guilty of these abuses:

1. Poor, misleading and incorrect advertising such as: "We pay your complete hospital bill."

2. Stories agents tell prospects in order to sell policies. The result is a backfire on the whole idea of Voluntary Health Insurance.

3. Ineffective appeals to governmental agencies, i.e., not fighting to get actual costs from governmental agencies.

4. Blaming premium cost increases on physicians and hospitals.

This critque, it seems to me, should be taken to heart by all four groups.

Daugh W. Smith

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OCTOBER, 1952

EDITORIAL

THE PROGNOSIS IN BENIGN ESSENTIAL HYPERTENSION

There is common knowledge about diseases which occur frequently in the population. This smattering of information is derived from observations on friends and relatives, advice and explanation from physicians passed on in second and third-hand fashion, and from articles written for lay magazines. One of these diseases known to the laity is hypertension. The patient can know little of the several causes of hypertension and their effect on prognosis. All he knows is that 'so and so' had "high blood pressure" and died from heart disease, uremia or a cerebral accident. Unfortunately the physician too often does not use judgment in discussing the significance and prognosis in the given case of elevated blood pressure. He sometimes is too emphatic in the restrictions laid upon the life activities of his patient. (This is rather curious since there is not a physician of years of experience who can not name among his patients some who have gone for decades with known hypertension.) This fact too often leads a patient to fear for his life; he becomes a semi-invalid and is subject to psychoneurotic manifestations.

Numerous papers have appeared in the past trying to evaluate the prognosis of hypertension in its natural course. Many of these papers have been unsatisfactory because of the case selection. A recent paper worthy of perusal has appeared by O'Hara and Holden*, a report on 100 cases of benign essential hypertension, followed from 10 to 34 years. Seventy-eight per cent of these were private patients of the senior author, the middle class people who could not have exceptional care. The other 22 per cent were patients from the Peter Bent Brigham Hospital—observations on them having been made by the senior author of his associates. The selection of these cases should be noted. These cases had "(1) a documented history of 10 or more years of hypertension (systolic 145 mm., diastolic 95 mm., minimum; (2) absence of primary renal disease (glomerulonephritis or pyelonephritis); (3) absence of coarctation of the aorta, valvular heart disease, hyperthyroidism, and similar disorders causing hypertension and (4) absence of any radical therapy, such as sympathectomy and rice diet." Sixty-seven were women and 33 were men.

These patients were treated by the usual conservative methods of weight reduction, sedation and general advice. They were followed for from 10 to 34 years with an average of 17 years; 71 per cent of the patients are still living including the one living 34 years. Twenty-three patients lived more than 20 years (25 on the average) and 16 of these are still alive. Death has occurred in 29—in 14 due to cerebrovascular accident, in 8 to coronary thrombosis and in 3 to myocardial failure. The other 4 died of unrelated or unknown causes. The 71 still alive, are classified as—47 in "good" and 19 in "fair" condition and 5 as in "poor" health. The cause of death given is the principle cause. Various complications occurred not infrequently in both the living and those who have died. Thus coronary insufficiency occurred in 51 per cent of all 100 patients and except for 8, in all of the 29 who died. In addition to the 8 who died of coronary thrombosis, 12 others had this complication. Myocardial failure was recorded in 19 of the series being a factor in 13 patients who died in addition to the 3 whose death was principally to this complication. Cerebrovascular accident occurred in 28 of the 100 patients. Chronic nephritis appeared in 12 patients but killed only one.

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*O'Hara, J. P. and Holden, R. B.: Longevity in Benign Essential Hypertension, J.A.M.A., 149:1453, 1952.

The onset of hypertension in a younger age is not particularly gloomy in the benign type. The age of onset in 28 patients was less than 40 years; 10 of the 23 patients who lived 20 or more years had the onset of hypertension before forty.

The blood pressure levels in benign essential hypertension show great variation on "spot checks"—the average systolic variation being about 70 and the diastolic being 40 millimeters. Individual variations have been recorded to be as much as 150 mm. systolic and 80 mm. diastolic. A constant low level of hypertension with few or no swings show an exceptionally good prognosis. Rising diastolic pressures indicate a poor prognosis. Basal diastolic readings of about 90, as compared to those around 100, have a better prognosis than the latter. Of all the patients only 22 showed retinal arteriolar changes of as much as the grade 3 type. This seems to indicate that the arterioles stand the strain of benign hypertension very well.

The electrocardiographic and X-ray studies revealed little of prognostic aid.

This editorial review has attempted to portray the outlook for the patient having *benign essential hypertension.* It is not too bad. The physician's attitude should thus be encouraging not gloomy. Your editor has often wondered whether the unpleasant salt diet or even more monotonous rice diet in these cases is justified. Do they add years to life? Who can say in disease whose natural course may be 20 to 30 years. Would the physician himself follow a salt poor or rice diet for two decades! Your editor doubts it.

Let the family doctor then be sure of his classification of the hypertension in his patient. If of the benign type, observation for a time with reassurance, sedatives and weight reduction should precede any drastic change of life. The patient should not be bundled off immediately to the 'specialist' in the big city, an experience in itself implying that "things are mighty bad." The immediate elimination of appetite and all pleasure in eating by advising a salt poor or rice diet seems open to question unless it is used for weight reduction through lessened caloric intake. Rather a reduction diet, with interdiction of salt added for seasoning, above that used in cooking, would seem more preferable. By following such a plan surely the number of "blood pressure psychoneurotics" can be reduced substantially.

R. H. K.

*

BLUE CROSS AGAIN THROWS A BLOCK TO COMPULSORY HEALTH INSURANCE

In this year of 1952, when the American electorate will cast the die for a continued march toward socialism, or possibly to call it to a halt for the moment at least, the recent steps taken by our own Blue Cross approved Tennessee Hospital Service Association are significant.

Modern medicine and all that it implies in diagnostic and therapeutic methods and skills has led to remarkable increases in hospitalization. Admissions to general hospitals have increased from 7,775,000 in 1936 to 19,000,000 in 1951. Newer technics and the necessary equipment are expensive. This plus inflation has increased the cost of hospital care astoundingly—$4,000,000,000 in 1951, double what it was in 1946.

Since it is an understandable weakness of the human being that he dislikes to pay bills for something he does not desire, one can see he would welcome, and in many quarters he does ask that other tax-payers help pay this staggering hospital bill. Certainly he is much more likely to demand that his fellow tax-payers pay his hospital bill than for his television set or his new car—just as he is more likely to ask the tax-payer to pay his doctor than he is to ask him to pay for his new fishing rod or the new permanent hair-do.

This dodging of responsibility for unpleasant debts no doubt has been one of the basic reasons for the development of the philosophy of compulsory health insurance. This of course, has been abetted by "intelligent, sentimental socialists," idealists with a flat perspective of practicality.

The appearance of compulsory health insurance on the scene has been prevented up to the present time only by voluntary hospital and medical care programs. Only by the education of the public, in which industry has played a large role, have our people been making provision for the unwelcome hospital and doctor bills. The Blue Cross has provided the major defense, along with other hospitalization plans, at the barricades against state medicine. Of some 70 million protected against hospitalization over 43,000,000 are members of Blue Cross.

Now our own Blue Cross takes a couple of new forward steps to strengthen voluntary hospital and health plans. First as an answer to inflation and increased demand for hospitalization, it is offering a more comprehensive contract, eight dollars instead of six per day against the hospital bill. This permits the coverage of costs of new drugs—the antibiotics and cortisone and other hormones. (This comprehensive contract is available for groups only, in which twenty-five or more employees constitute the group.)

Of probably greater importance is the Open Enrollment in Blue Cross offered to the people of Tennessee. This permitted those, who heretofore could not enroll because they were not employees in groups of five or more, to become eligible for membership. Now those under the age of 65 and employed in groups of less than five, self-employed or unemployed have had an opportunity to enroll under the hospitalization and health plan at premium rates similar to those provided groups.

Such steps steal the ammunition from Oscar Ewing and others in Washington who claim that those of modest or average income cannot meet the exigencies of serious illness. It is comforting to know that the soundness of Blue Cross permits these steps on, no doubt, a well-grounded actuarial basis. If the idealists will have patience in awaiting actuarial experience, unquestionably new and greater benefits may be offered in the future. It is needless to ask politicos to have patience for they must make hay *now* out of such issues as the Nation's health.

The members of the profession should never forget that Blue Cross and other hospital and health plans are and will be strong allies in stalling the steam roller of Federalized medicine.

(The reader must accept his responsibilities in making a success of voluntary hospitalization insurance, as set forth on the President's Page of this issue.)

R. H. K.

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DIABETES DETECTION DRIVE

The week of November 16-22 has been set for the Diabetes Detection Drive. This movement was inaugurated by the American Diabetes Association. It has grown from year to year with emphasis on the attempt to pick up unrecognized cases of diabetes. This year thirty state and seven hundred county medical societies have active plans for participation. Ten county societies in Tennessee have plans for active participation. Ten county societies in Tennessee have plans for active participation. This movement deserves all the help the medical profession can give.

R. H. K.

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REPORT OF THE COMMISSION ON STUDY OF THE MEDICAL INDIGENCY PROBLEM

Twice this year these editorial pages* have acquainted you with activities in favor of a subject in which we of the Tennessee State Medical Association have taken a deep interest,—*provision for the hospitalization of the medically indigent* of the State.

The Chairman of the Public Service Committee and other representatives of the Tennessee State Medical Association took an active interest in this matter during the 1951 session of the State Legislature. Since it was too late for definitive action, a Commission was established and money appropriated, for the purpose of studying the problem and to report before the next session of the legislature. The House of Delegates of the Association at its meeting in Knoxville in April adopted a resolution which read in part that it "*go on record in support of legislation to establish a state-county program of paying the hospital bills of the truly medically indigent citizens of this state.*" The Commission now makes its report to the Governor. Portions of this,—the summary and recommendations,—appear after these pages.

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*Editorial. Hospitalization for Tennessee Indigents, 45:34, 1952; The Indigent Must Be Served, 45:105, 1952.

Here is a piece of Public Service which even the most violent of our antagonists cannot attack,—since we as a profession urge hospitalization for the indigent with the guarantee of *free professional service* as given for the past 122 years by the members of the Association. Now the physicians of the State must urge the passage of the necessary legislation to put the Commission's recommendations in effect. From these pre-elections days, through the interval before the legislative session and throughout its course, pressure by the doctors on their elected representatives must be maintained.

On this same page compulsory health insurance is indicated as being socialistic. Is not hospitalization for the indigent socialistic? Yes, if charity is socialism, so is hospitalization of the indigent! However, by definition socialism and charity are not akin. The poor and unfortunate are always with us. The ethics of the family, of many tribes, of certain of the civilizations before the days of Christianity and in the centuries since then, have included in its practices care for the indigent. "Poor laws" date to the Middle Ages. *Your* unpaid care of the indigent is not socialism. The best proof that care of the indigent is not socialistic lies in the fact that of eight "humanitarian" compulsory health insurance bills which have been introduced into Congress, not one contained any mention of the indigent.

Your editor hopes that you will have the time to read this summary of the Commission's report which follows. He further urges you to do all in your power to obtain passage of legislation for the hospitalization of the indigent.

R. H. K.

SPECIAL ITEM

The summary and recommendations of the Study Commission for Hospitalization of the Indigent is published for information of the members of the Association. This is the result of interests of the Public Service Committee and has the endorsement of the House of Delegates. All members should be informed about this matter so they may urge their representatives in the legislature to take an active part in legislation to effect these recommendations. (Copies of the complete report may be obtained from Mr. Ed Bridges in the office of the Tennessee State Medical Association.)—Editor.

Study Commission for Hospitalization of the Indigent

Final Report

Summary

The availability of hospital care for all Tennesseans whose health can be materially improved by definitive treatment by a physician in a hospital is essential to the general welfare. But at the present time only a very few cities and counties in the state make anything like adequate provision for this need.

In the state as a whole cities and counties provide $3,774,991.00 for this purpose. But seven counties provide 94.9 per cent of this money and contain only 41.2 per cent of the total population. Forty-two other counties make some provision, but the average they provide is less than 0.30 per capita per year and 42 counties make no provision.

The seven counties which make the most provision for this purpose include the four largest (Shelby, Davidson, Hamilton and Knox) and three smaller counties (Madison, Obion and Cumberland) in which general hospitals have recently been built with the aid of funds through the Hospital Construction Program.

The counties that make no provision and those that make the least provision are those counties that are relatively remote from large cities, small in population and low in per capita taxable wealth.

Since the hospital care of the indigent is not being adequately supported by the communities—city, county and state—in which they live, the general hospitals within the state have had no choice but to absorb this expense.

Twenty-six and five-tenths per cent of all patients hospitalized in general hospitals in Tennessee are indigent as far as paying their hospital bills. These hospitals owned and operated by cities or counties and therefore having the care of the indigent as one of their main objectives cared for 49.6 per cent of the indigent patients. But hospitals owned by non-profit associations and those privately owned cared for the remaining 50.4 per cent.

All types of general hospitals in the state also care for paying patients. In the publicly owned hospitals 51.9 per cent of patients pay their bills while in the other types of hospitals approximately 85 per cent are paying patients.

The general hospitals absorbed the cost of caring for the indigent patients they admitted, by high charges to paying patients and by operating at actual financial deficits. In the publicly owned hospitals 4.3 per cent and in the non-profit hospitals 5.5 per cent of all fees received from patients represented payments in excess of the cost of providing services to those patients. And in the fiscal year of this study all general hospitals incurred a financial deficit of approximately $1,600,000.00.

Both of these are unsatisfactory and limited expedients. In the period since World War II the general hospitals have been forced to resort to increasingly high charges to paying patients. These charges are now so high as to be a serious problem to many families which are normally self-supporting. If these charges rise much more, many families will be forced into the position of being medically indigent, and this would be a great disadvantage to them and to the community in which they live.

A hospital, like any other public agency, must manage to pay its bills in some way. When income is inadequate and cannot be increased in a given period of operation, costs must be curtailed. When this occurs, the hospital is forced to adopt such policies as neglecting the maintenance of buildings and equipment, failure to employ sufficient numbers of skillful personnel, failure to provide the services the patients need, failure to institute new and beneficial services or even restriction of the supply of drugs and food available for patients. Therefore, the occurrence of a financial deficit in the operation of a hospital represents not only some threat to its continued operation, but also a relatively serious impairment of its services to the sick members of the community.

In spite of the considerable effort made by the general hospitals there is reason to believe that a substantial number of indigent Tennesseans do not get admitted to hospitals when they need it. Therefore, they must accept suffering, disability and even death that could have been avoided by treatment that could only be carried out in a modern hospital.

Study of the history of medical care of the indigent in this country and of the programs now in operation in other states reveals that the payment for professional services is complex, difficult and about as expensive as all other elements of the program involved. In Tennessee, the medical profession has offered to supply the professional care these indigent patients need while in the hospital without cost to the program if the community—city, county and state—will arrange for the payment of the hospital costs. This generous offer makes it possible to plan a program that is simpler and far less expensive to the community than would otherwise be the case.

The Commission draws the conclusion that it is the responsibility of the community in which the patient lives to provide hospital care for the indigent which they clearly need and which can be materially beneficial to them. This responsibility should be discharged by the smallest political unit that can effectively do so. But in Tennessee many counties are so small in population and poor in per capita taxable wealth that they cannot effectively discharge this responsibility. Therefore, the state should assume part of the responsibility by establishing an equitable state-wide program. In this program the counties and the state should share the financial load.

Such a program is outlined in the body of this report and is strongly recommended.

Recommendations

1. The State of Tennessee should assume part of the responsibility of seeing that hospitalization and medical care are equally available to all indigent sick and injured Tennesseans who can clearly be helped by such treatment.

2. To discharge this responsibility the General Assembly should establish a Program for Indigent Hospitalization to be financed by State funds on a basis of matching by the counties.

3. The Program should be based upon the principle that the medical profession will provide the professional medical services these indigent patients need while in the hospital without cost to the Program.

4. The Program should also be based on the principle of paying such costs to each participating hospital for each indigent patient under the program as to obviate the necessity of hospitals subsiding the program.

5. The Program for Indigent Hospitalization should be designed and administered to pay the cost of hospitalization for those citizens who are sick or injured and who can be markedly helped by definitive treatment in a hospital, and who are clearly unable to meet the full cost from their own resources or those upon whom they are legally dependent. It should not be burdened by attempting to provide purely domiciliary or nursing care for citizens with chronic, permanently disabling illness, or illness already cared for by special programs of the State.

6. The determination of medical need should be based on the examination and written certification by a physician who holds an unlimited license to practice medicine in Tennessee. The determination of the liklihood of material benefit from hospitalization should be made jointly by the examining physician and staff of the hospital to which the patient is referred. The determination of financial eligibility should be made by or under the direction of a committee in the county in which the patient resides. This committee should be made up of representatives of the county government, the general public and the medical profession.

7. The General Assembly should designate the Department of Public Health, Division of Medical Care, as the agency to administer the Program for Indigent Hospitalization for the State.

8. The Department of Public Health, Division of Medical Care, should also be designated as the agency to administer the licensing of hospitals.

9. The Program should include an Advisory Committee made up from citizens representing the interests of Hospital Administrators, the Medical Profession and the General Public. It should be the duty of the Advisory Committee to make a detailed study of the operation of the Program to the end that it can advise means of improving the Program and can make recommendations through the Public Health Council to the General Assembly on the size of the appropriation for the Program in future biennial periods.

10. (a) The maximum joint participation program for each county shall be equal to the population multiplied by the per capita program level subject to joint participation.

In accordance with other assistance plans it is recommended that the state contribute 60 per cent and counties 40 per cent. The per capita amount shall be obtained by dividing the maximum amount possible in joint participation program by the population of the state.

For the initial year a state appropriation of $1,600,000 is recommended. With a 60 per cent state contribution and 40 per cent county contribution the total amount available would be $2,666,667. Based on a state population of 3,261,489 (1950 census population excluding Oak Ridge, a federal reservation not subject to tax) the per capita amount would be 81.76226 cents.

(b) The equalized local share for all counties shall be the total amount required from all county funds (40 per cent) divided by the total equalized valuation for the state.

For the initial year a maximum county contribution of 1,066,667 is recommended. Based on the total equalized assessed valuation of $4,817,161,756 this would be 0.2214306 per $1,000 of equalized assessed valuation.

For the required participation of each county this amount (0.0002214306) shall be multiplied by the equalized assessed valuations as published by the Tennessee Taxpayers Association.

11. The Department of Public Health, Division of Medical Care, should be given the authority and responsibility of establishing detailed rules and regulations which will govern the operation of the Program for Indigent Hospitalization so that it conforms with the intent of the General Assembly.

12. The Department of Public Health, Division of Medical Care, should establish and publish criteria for hospitals wishing to receive payment for the care of indigent patients through this program and should conduct such inspection as are needed to determine whether the criteria have been met.

13. The Department of Public Health, Division of Medical Care, should establish and publish procedures and policies to guide the local agencies in the determination of financial eligibility under this Program but the actual determination should be made in and by citizens of the county in which the patient lives.

14. The full participation of the counties should be insured by financing the program through some fund collected by the state and distributed to the counties.

15. To insure accurate and fair determination of full costs in the hospitals, each hospital should be required to keep comparable records of account in a manner specified by the Department of Public Health, to hold these accounts open to auditing by the Department of Public Health and to submit such reports as the Department shall require, or be required to accept a minimum rate fixed by the Department.

16. The Program should be administered in such a way as to provide hospitalization in whatever participating hospital can most effectively render the definitive treatment the individual patient needs without regard to the county in which the hospital is located, its size or type of ownership.

17. The Program should also be administered in such a way as to supplement, rather than replace, the provisions already made by some counties and cities. The funds appropriated by the State should not be used to replace funds now appropriated by cities and counties for this purpose, but these local funds should be considered as local appropriations to be matched by State funds on a basis determined by the formula (Rec. 10).

DEATHS

Dr. Kyle C. Copenhaver, Knoxville, died September 15, 1952, from a heart attack. He was 66. A native of Virginia, he received his M.D. degree from the University of Tennessee Medical School in 1912. He served overseas for one year in the Medical Corps and was discharged as a major in 1919. Since then he has been in private practice in Knoxville, having been chief of staff at Knoxville General and Fort Sanders Hospitals and a staff member of all other local hospitals. At the time of his death, he was president of the Acuff Clinic, a post to which he succeeded the late Dr. Herbert Acuff.

Dr. Copenhaver gave untiringly of his efforts to many civic and religious enterprises, but organized medicine received the greatest amount of his time and thought. He was a member and past-president of the Knoxville Academy of Medicine, was a member of its Judicial Council, and was a member and past-president of the Tennessee State Medical Association. He also held membership in the American Medical Association, and was a fellow of the Southeastern Surgical Congress and the International College of Surgeons.

For many years, Dr. Copenhaver served as Councilor of the Second District of this Association and was Chairman of the Council, and a member of the Association's Committees on UMWA Liaison, Insurance, and Veterans Affairs at the time of his passing.

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Dr. Hugh Barr, Nashville, died of a heart ailment August 3, 1952. Age 69.

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Dr. D. W. Galloway, Memphis, retired, died September 6, 1952, after an illness of two years. Age 69.

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Dr. William A. Nailling, Union City, retired, died September 6, 1952. Age 80.

Dr. C. C. Chaffee, Brunswick, died September 4, 1952, after an illness of nine months. Age 62.

✶

Dr. Talmai Z. Elinor, Crawley Store Community, died August 8, 1952. Age 77.

✶

Dr. James M. Derrick, Hawkins, died August 22, 1952. Age 65.

✶

Dr. Crockett D. Robbins, Gallatin, died after an illness of two years, September 15, 1952. Age 71.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Washington-Carter-Unicoi Society

The Society sponsored a combined dinner meeting for members and their wives on September 18 at the Johnson City Country Club for the purpose of hearing an address by Dr. D. W. Smith, Nashville, President of the Association. In addition to the members of the tri-county society, physicians and their wives from Sullivan, Johnson, Greene and Hamblen counties were also invited. About 125 persons were present. Dr. Smith, who was introduced by Dr. H. L. Monroe of Erwin, Councilor of the first district, spoke on the subject "The Physician's Responsibility to Society."

✶

Memphis and Shelby County Society

The August 5 program was held at the Memphis Country Club with members hearing a symposium on "Modern Management of the Nervous and Mental Patient." Speakers and their subjects were: Dr. Charles W. Miller, Jr., "The Psychoneurotic"; Dr. Samuel Paster, "Modern Shock Therapy"; Dr. A. R. Tyrer, Jr., "Surgery for Mental Diseases"; and Dr. E. L. Baker, "The Place of the State Hospital." Dr. Baker is superintendent of Western State Hospital at Bolivar. Dr. Ernst Schmidhofer, chief of the neuropsychiatric section at Kennedy VA Hospital, led the discussion.

The September 2 meeting of the Society was held at the Pathology Institute of the University of Tennessee with a symposium on the "Use and Abuse of Modern Drugs." The symposium followed a meeting of the Society's House of Delegates with the following participating: Dr. John B. Young, "Antibiotics"; Dr. Bernard M. Zussman, "Cortisone and ACTH"; Dr. Robert F. Ackerman, "Endocrine Preparations and Vitamins"; Dr. C. C. McCool, "Sedatives and Narcotics."

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Consolidated Medical Assembly

Fifty-nine doctors from the fourteen counties composing the Assembly heard a symposium from the Department of Obstetrics and Gynecology of the University of Tennessee at the Assembly's dinner meeting in Jackson on September 2. The subject was "Abnormal Bleeding in the Female." Dr. Bob Dillman discussed "Etiology and Pathology"; Dr. Ben Everett, "Treatment of Obstetrical Bleeding"; Dr. Phil Schrier, "Treatment of Gynecological Bleeding"; and Dr. Henry Turner discussed "The Differential Diagnosis" and acted as moderator of the group. Dr. Julian K. Welch, Brownsville, president of the Assembly, presided.

✶

Five County Medical Society

One of this newly organized and progressive Society's programs was a "prepare to vote" campaign. At a recent meeting of the Society it was announced that all members of the Society, and members of their families of voting age, are registered and ready to vote. The Society, in cooperation with this Association's Public Service Department, is conducting a novel course in postgraduate education. The first meeting was held in Cookeville on September 25 with a large number of doctors from the Cumberland area present. Several Nashville physicians also attended. Under the Society's plan, an outstanding physician, usually connected with the research department of large pharmaceutical firms, will be the essayist. The programs are exclusively scientific and the commercial angle is meticulously avoided. Doctors from all over Middle Tennessee are invited to attend the monthly lectures. Dr. William Hensley, Jr., Cookeville, is President of the Society.

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Four County Medical Society

The Society held its regular bi-monthly meeting at Frank's Cafe in Camden on September 16. Following a fish dinner, Dr. John R. Glover, Nashville, addressed the Society on "Common Fractures." Plans were made for the annual meeting of the Society in November. The Society, less than one year old, has had excellent programs and attendance by the physicians in Henry, Weakley, Carroll and Benton Counties.

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Knoxville Academy of Medicine

The September 9 program was presented by Dr. D. T. Chamberlain who discussed "Gastroscopy." His paper was discussed by Drs. M. C. Bowman and John H. Hall.

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Dr. George Henson was the essayist at the regular meeting of the Academy on September 23 at the Academy's Assembly Hall. His subject was "Beriberi with a Case Report." Discussion was led by Drs. John Avera and H. L. Pope. This year's officers of the Academy are Dr. J. B. Naive, President; Dr. S. J. Platt, President-Elect; Dr. Herbert Pope, Vice-President; and Dr. Ralph Monger, Secretary.

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McMinn County Medical Society

Members of the Society sponsored the opening of a new health unit building in Athens recently. A special ceremony was held when the building was presented to the public health department on September 6. Dr. A. M. Shelamer is the new public health officer of the district which is now headquartered in the new building at Athens. Counties in the district are McMinn, Polk, Meigs and Monroe.

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Maury County Medical Society

The Society adopted a formal resolution on September 9 endorsing the local Red Cross Blood Program and authorized Dr. C. D. Walton of Mount Pleasant to inform the public of its action.

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Nashville Academy of Medicine and Davidson County Medical Society

The Nashville Academy of Medicine recently held two meetings of considerable importance to their membership. The first was a meeting held on September 9 with members of the Academy as guests of the Mid-State Baptist Hospital for dinner. The meeting consisted of a report to the membership on Academy business and activities by officers of the Society and members of the Board of Directors. Participating officers were Dr. Hollis E. Johnson, Dr. Willard O. Tirrill and Dr. W. G. Kennon. Members of the Board participating were Dr. R. N. Buchanan, Dr. James C. Gardner, Dr. D. W. Smith, Dr. R. H. Kampmeier, Dr. W. O. Vaughan and Dr. John B. Youmans. Dr. W. O. Tirrill rendered a detailed report on public service and public relations activities being conducted. Following the report of the officers and members of the Board, questions from the floor were asked dealing with such subjects as supplying blood for the Red Cross Blood Bank, the number of doctors participating in the emergency call service, cases before the grievance committee, the Academy of Medicine's Group Insurance Program, excessive medical meetings and related subjects dealing with the everyday activities of the society.

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The second meeting, the first of its kind held by the Nashville Academy, was conducted on September 23 in the Assembly Hall of the Doctors Building. The program consisted of a panel or representative lay leaders and the title of the meeting was "What's Your Trouble, Doctor?" The panel consisted of:

Mr. Coleman Harwell, Vice-President and Editor, *Nashville Tennessean*
Mr. Cecil Sims, attorney and civic leader
Mr. Lee Sanders, President, Nashville Trades and Labor Council

Members of the panel pointed out many of the criticisms that are heard from the public towards doctors. After each member of the panel finished, a spirited question and answer session followed. A large turnout of Nashville doctors was present to hear the interesting discussion.

NATIONAL NEWS

Physicians Fees Increased Less Than One Per Cent in Second Quarter

Bureau of Labor Statistics, in quarterly report on changes in medical care and drug costs, notes that all physicians' fees on the average have increased about 0.8% between mid-March and mid-June. All living costs in the same period rose 0.9%, BLS said The agency estimated general practitioners' fees rose 0.9%, while surgeons' and specialists' fees were virtually unchanged in the 3-month period. The rate of increase in hospital charges has slowed down from recent months, with an increase of only 2% noted. Group hospitalization (Blue Cross) rates, however, were up 8%. Over-all medical and drug costs rose about 2%, BLS said.

* * *

Flow of Supplies Starts for Federal Civil Defense Medical Stockpiles

After months of negotiations, Federal Civil Defense Administration reports that on July 15 it had $1,574,378 in medical supplies and equipment stored in seven federal regional warehouses. *This is 2.67% of the $60 million Congress made available up to July 1,* all now on contract. Almost all material was received after June 1, and shipments soon will be "mushrooming," FCDA said. Regional stockpiles are purchased and maintained entirely by U. S. funds; they are designed to supplement state and local supplies in case of a disaster.

State procurement programs, which FCDA has been pushing for over a year and for which U. S. supplies half the funds, are farther advanced. Half of the $20 million originally earmarked for these matching grants has been used by 13 participating states; on July 15 they had received $3,159,664 in supplies, about a third of the amount on order.

Antibiotics make up a majority of federal supplies and also are the highest dollar-value item going to states. Currently, FCDA officials are working on a budget for fiscal 1953. One problem is to determine how much to spend on the blood program and how much for other medical supplies. Congress allowed FCDA $40 million this year for all agency expenses, in contrast to about $100 million last year.

* * *

Dr. Louis H. Bauer, President of the American Medical Association, has issued the following statement:

"Dr. Elmer L. Henderson of Louisville, Kentucky, Chairman of the Association's Coordinating Committee, which has supervised the campaign against socialized medicine, has resigned his committee chairmanship so that he may be free to participate in the presidential election campaign.

"Clem Whitaker and Leone Baxter, Directors of the AMA National Education Campaign, have asked to be released from their public relations assignment for the same reason.

"These resignations mark the official termination of the AMA National Education Campaign, which for the past four years has been eminently successful in arousing the American people to the dangers of socialized medicine, and which has played a vital part in accelerating the growth and development of Voluntary Health Insurance. The American Medical Association, on this occasion, wishes to thank the American people for their heartening demonstration of confidence and support.

"The AMA, as a nonpartisan, professional organization, is barred, both ethically and legally, from participating in election campaigns, which explains the action of Dr. Henderson and Mr. Whitaker and Miss Baxter in asking for their release from AMA duties. The association will take no part in the presidential election, except to join with other nonpartisan groups in urging all eligible voters to cast their ballots on election day, regardless of their affiliations or preferences. Individual doctors, of course, are entirely free to engage in election activities and, in fact, have a very real responsibility to make their influence felt for good government."

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

A $5,200 research award by the U. S. Navy has been made to Dr. Arne Hunninen of the Department of Preventive Medicine to study the pathogenicity of human strains of Endameba histolytica in rabbits.

* * *

Physicians of the mid-south may be enrolled in two-week courses for bedside training in pediatrics at the Le Bonheur Children's Hospital and John Gaston Hospital for a fee of $50. A physician will be accepted on the first and fifteenth of each month.

Three new members have been added to the staff of the Division of Anatomy. They are: George G. Robinson, Ph.D., professor; Harry H. Wilcox, Ph.D., assistant professor; and Marvin I. Gottlieb, Ph.D., instructor.

*

The General Practice Office of the University of Tennessee and the Department of Pediatrics will have an exhibit at the Denver Scientific Meeting of the A.M.A.,—an exhibit to cover office pediatrics for general practitioners. A live demonstration of periodic health examinations done on children of varying ages will be the major part of this exhibit. Along with the actual examination, a verbal commentary will be piped to the audience through loud speakers located in the booth.

*

The University of Tennessee General Practice Office has begun a free general practice location service. Each of these locations is investigated, some of them personally, and we believe that only the best locations are indexed in our files. Information on these cities is available by mail to any qualified general practitioner and members of the General Practice Staff who have volunteered to give their time to cooperate in investigating any phase of the problem of establishing a practice that the young physicians may desire. Members of our staff will be glad to go into the problem of original equipment purchases, financing medical equipment, and will be glad, whenever possible, to help personally in establishing rural locations for men wishing to do a general practice. This is not designed as a commercial service. It simply is an offer on the part of the General Practice Staff of The University of Tennessee to help in any way possible to see to it that more physicians are located in the rural areas.

*

Murfreesboro V.A. Hospital

Dr. Paul H. Hoch of the New York State Psychiatric Institute and Columbia University lectured to the Medical Staff on September 19 on the following subjects: (1) "Some Theoretical and Clinical Aspects of Anxiety"; (2) "Experimentally Produced Abnormal Mental States"; and (3) "Indications for Treatment with Special Consideration of Intractable Cases."

*

Postgraduate Medical Study

The postgraduate course in Internal Medicine and Circulatory Diseases by Dr. John F. Dee opened in Circuit VI during the week of September 15-19. The teaching centers are Paris, Union City, Dyersburg, Trenton, and Memphis.

The enrollment for this circuit is good. There are more than 200 enrolled for the course and several new physicians are registered for their first postgraduate course.

Baptist Memorial Hospital, Saint Joseph Hospital, and Methodist Hospital paid the fee for all interns and residents who were interested in attending the lectures. There are fifty-eight interns and residents enrolled for the course, which included a group from John Gaston Hospital, also.

The attendance for Circuit V, which includes the centers of Knoxville, Maryville, Newport, Morristown, and LaFollette, was very good. More than 100 doctors received Certificates of Attendance, which means that they attended eight or more of the ten lectures by Doctor Dee. The average attendance for the circuit was 77.56 per cent. Dr. Dee was also kept busy during the circuit with consultations.

Organizational work will begin immediately in Nashville, Springfield, Gallatin, Clarksville, and Dickson. Announcement letters will be forwarded to all physicians in the counties of Circuit VII in the near future as the course is scheduled to open in the centers named above in early December.

PERSONAL NEWS

Dr. Claude C. Snoddy opened offices in Tullahoma on October 1. In January he will be joined by **Dr. Bruce E. Galbraith** who, along with Dr. Snoddy, is serving his surgical residency at Nashville General Hospital.

The Bell and Crosby Clinic, Dickson, reopened recently with the deferment from the service of **Dr. Billy Crosby** who has been deferred until Debember 5. **Dr. W. A. Bell, Jr.**, Dr. Crosby's partner, is slated to receive his discharge from the Armed Forces on December 1.

Dr. C. E. Peery has purchased property in McMinnville to be remodeled into a modern office and clinic for the use of his private practice.

Dr. Edgar L. Womack, Manchester physician, is one of the 64 doctors recognized for 50 years of service, at the University of Tennessee Medical Unit commencement exercises in Memphis, on September 29.

Dr. Charles E. Black, industrial physician from Indiana, has joined the Oak Ridge National Laboratory Health division staff.

Due to the recent illness of **Dr. F. J. Malone, Dr. Charles A. Trahern** has been appointed temporary Montgomery County health officer.

Dr. W. Roy Van Allen of Chattanooga has been appointed the new medical director of Montview Sanitarium.

Dr. Elizabeth W. Kirby-Smith sailed recently for Europe where she attended the international conference of medical women held in Vichy, France, in September. She will visit Italy and England before returning by plane to this country and back to her practice in Sewanee, Tenn.

Upon completion of the new state tuberculosis hospital in Nashville, the new medical director will be **Dr. W. W. Hubbard**, who for many years has been director of the state tuberculosis hospital services.

Dr. H. M. Kelso of Knoxville has returned to the City Health Department as its principal medical officer. For the past year he has been associated with the Veterans Hospital at Mountain Home, Tenn.

Two new doctors will begin their medical practice in Paris, Tenn., on December 1. They are **Dr. E. P. Mobley** and **Dr. T. E. Boston**, both of Winfield, Ala.

Dr. T. P. Nash has recently become associated with the Ripley Clinic, Ripley, Tenn. Dr. Nash graduated in 1945 from the University of Tennessee School of Medicine where he was a member of A.O.A.

Dr. Minnie R. Vance, a pediatrician, has opened her offices in Chattanooga, Tenn. Dr. Vance received her degree of doctor of medicine in 1949 from the University of Tennessee School of Medicine.

Recently in Paris, Tenn., the memory of **Dr. I. A. McSwain** was noted as having been a portrait of the "Family Doctor" in days gone by. In his many years of service as a physician, Dr. McSwain received many honors from medical societies in Tennessee, Arkansas, Mississippi and Kentucky. A man well remembered by the "old-timers" of Paris, he was the father of a large family, of which two sons became doctors, **Dr. Horace McSwain** and **Dr. George McSwain.**

Dr. Jean Spencer Felton of Oak Ridge, Tenn., has been approved for fellowship in the American Medical Writers' Association.

In the July issue of *Current Medical Digest*, it is noted that **Dr. Frank G. Witherspoon** of Nashville wrote an article on recent advances in diagnosis and therapy entitled "Fallacies About the Skin."

At the 38th annual Clinical Congress of the American College of Surgeons in New York City, **Dr. John Burch** of Nashville was the moderator for a panel discussion on Gynecology and Obstetrics. During the same week, **Dr. Hugh Smith** of Memphis was among the collaborators for the Symposium on Graduate Training in Surgery and the Surgical Specialties, the subject discussed being "Residency Problems in Smaller Hospitals."

Dr. David R. Pickens has opened his office, for the practice of proctology, at 1915 Church Street, Nashville.

Dr. Luther E. Smith has joined Dr. Carl N. Gessler in practice in Donelson.

Dr. Douglas H. Riddell has become associated with Dr. James A. Kirtley, Jr., in the practice of surgery at 2318 West End Avenue, Nashville.

Dr. Pierce M. Ross announces the opening of his office for the practice of internal medicine in Nashville.

Dr. Douglas O'Dell announces the opening of his offices in the practice of surgery in the Doctors Building, Nashville.

Dr. John H. Beveridge has become associated with the firm of McClure, Lanier and Ivie, M.D.'s, in the practice of Radiology in Nashville.

BOOK REVIEW

Manual of Electrocardiography. By Benjamin F. Smith, M.D. 215 pages. Elsevier Press Ins., Houston-New York. 1952.

The electrocardiograph has become an important adjunct in the diagnosis and treatment of cardiac disease. This manual outlines basic principles and develops the theory of electrocardiography, with its application to the interpretation of electrocardiograms. The text is intended as a guide to the beginning student, either undergraduate or practicing physician. No attempt is made to comprehensively cover all aspects of the subject. Unipolar leads, intracavity potentials, incomplete blocks, auricular hypertrophy, intrinsicoid deflection, and other recent developments are included.

A section presents electrocardiograms and autopsy findings. No comment or descriptio of the electrocardiogram is made. The reviewer finds it difficult for the beginner to correctly interpret these records without directed analysis.

"Pen pictures of cardiology" are added as a special feature and contain brief descriptions of clinical syndromes produced by disease, disturbed function, or malformation of the heart, or of the great vessels. Treatment suggestions are included. These may prove useful to the general practitioner, for whom they are intended.

Lawrence A. Grossman, M.D.

LOCATION WANTED

Location Wanted

The Placement Service, particularly its mechanics, is being revised. Beginning next month, this column will carry CURRENT information on locations and physicians desiring locations in Tennessee. See Executive Secretary's Letter, this issue, for information on revision of the Placement Service.

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Diplomate, American Board of Psychiatry and Neurology, Inc., Medical Director

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As we tend to become smug in our medical practice of the day, it is refreshing to leaf back through the pages of medicine before our day. One then returns to the latest page with a broader viewpoint and with a better appreciation of the progress of medical science. This resume of therapy of a half century, by our Outstanding General Practitioner of 1951, recalls much to those of us who, though not nearly so old, were taught the virtues of calomel followed by salts and of "I. Q. & S." The youngest of our members will read the "unbelievable."

BRIEF REVIEW OF THERAPEUTIC MEASURES DURING THE LAST 53 YEARS*

J. T. MOORE, SR., M.D., Algood, Tenn.

I think it of interest to look back over a period of more than 50 years and to survey the field of medicine, taking an inventory of the grain which has been gathered. It remains an inspiration to me to note the great progress which has been made—to see it; to feel it; and to try to keep up with it.

Here I wish to cite a few items of history as I remember them. In March of 1899, when I graduated, at the University of Tennessee School of Medicine in Nashville, there was only a few makeshift automobiles in this country. I doubt there were as many as two dozen, in the city of Nashville. We only had a few sections of main highways with gravel or any kind of hard surface in patches on them. The rural roads were not graded or drained and in the winter time were what we called "hog wallows"—deep mud and ruts cut by wagons. I think it was about in 1908 that a movement was started to build a road through Tennessee from east to west. It was to be called, "The Memphis to Bristol Highway." A time was set to build it in 3 or 4 days. A survey was made, the time set and all the way from Memphis to Bristol, men with picks and shovels, mules and perhaps some scrapers, went to work and scratched in places along the way. This road is now one of our finest highways, No. 70. I mention this to illustrate some of the handicaps in applying our chosen profession in those days. Furthermore, we had no telephone exchanges except in the larger cities and towns. The rural towns, including many county seats, had only one or two telephones for long distance only.

In those early days we were poorly equipped compared with the young doctors of today. In addition we had to contend with unsanitary conditions, ignorance, faith doctors, quacks and even some witchery. We had to educate, plead and argue, and if it had been fashionable in those days, we might have cursed in defense of the principles we believed to be right. There were many ignorant doctors scattered over the state, practicing legally without ever having attended a medical school. There was a time when all they had to do was to register with their county clerks as a doctor of medicine and go to practicing. Under such circumstances, we had a great work to do and we have come a long way.

Just from my own experience and knowledge I think it appropriate to designate the last few years of the last century and the first decade of this as an *era of purgation and partial starvation* in the treatment of disease. The predominant idea was to give a strong purgative in the beginning of almost every acute illness, regardless of age.

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*Read before the Tennessee State Medical Association, Knoxville, April 8-9, 1952.

The most popular drugs, for this purpose, being calomel, castor oil and epsom salts. Usually calomel was given the first day, followed next morning by castor oil or salts; then through the course of the disease some kind of pill was given, such as cascara comp. and/or comp. cathartic pill, containing 1 gr. calomel. Great emphasis was laid on keeping the bowels open. Seldomly an enema was used. The people were taught to keep the bowels open by purgatives or laxatives, that the liver was torpid and needed stirring up, that they were bilious, that the tongue was coated to account for the bad taste in the mouth. Calomel was the 'king bee' for the liver in those days. The large amounts of the drug given is almost unbelievable. Some uneducated doctors, I recall, would give as much as 50 or 60 grains in divided doses; they measured out the powder on a pocket knife. Wood, an author on therapeutics in 1905, observed that 10 or 12 grains would have as much effect as 1 ounce and that 1 pound had been given to a few cases of cholera without very extreme visible effect!

The principle diseases with which we had to contend in the early days of my practice were tuberculosis, typhoid fever, gastrointestinal diseases of children and of course the children's diseases, which all little ones were doomed to have. Old people were supposed to die of 'old age' and we were called in the terminal stages of their diseases. Occasionally one would die of what the people called "bilious colic," or perhaps heart disease, or occasionally it was reported that they died of fever. We had no vital statistics recorded in Tennessee until 1914. From then on, for several years, the records were very incomplete for some people resented such a useless law. They would not name their babies, or report a sudden death, or one where no physician had been called, until finally a law was passed requiring a death certificate before they could bury their dead.

Tuberculosis was called the "Great White Plague." For many years, one-seventh of all deaths were due to this terrible disease. Even after the discovery of the tubercle bacillus, it required many years to convince people the disease was contagious. Entire families were wiped out. Uneducated people believed it to be hereditary, and thus did not fear it. Many would sit up nights in closed rooms with a coughing, slowly dying tuberculous persons. They would tell you they didn't believe in the germ theory. (Under my own observation since 1912, I have followed a family of 13 with tuberculosis. Both parents and 6 children have died. One of the 5 is still living as an apparently cured case and one an invalid with fibroid tuberculosis. Another had the disease and only two have apparently escaped.) Treatment of tuberculosis in this era was unsatisfactory because an early diagnosis was seldom made or, if made, it was very unusual that we could get an active person to take proper treatment. The consequencies were that the patient kept going; was never told he had the disease until unable to go any longer. Then it was announced the case was far advanced and the patient doomed to die. It was a rather secret matter up to this time, on the part of both the family and the doctor. We physicians could see a 'marked person' in the family and were not frank enough to say it. One reason for this was that we did not know what to do if we did make an early diagnosis. We could not give a favorable prognosis even in an early case. In this discouraging situation we used medicines as cod liver oil, hypophosphites, creosote, iodine, cough syrups, opium and some recommended whiskey. Nothing was of much value. Tyson and Loomis both recommended a high, dry climate and that the patient be given daily exercise. Each of these authors recommended good nourishing food, cod liver oil and creosote, fresh air day and night. This was the best we knew, but it is obvious now that they were inadequate. If we decided a patient was going to die, we said, "Go west, go west"—to Colorado or New Mexico for a change of climate. There they usually died or came home to die. It was not until about 1907 that the great Osler emphasized the value of rest and sunshine. This was the dawn of the beginning of hope in the treatment of this disease.

Typhoid Fever. The only person ever benefited by this disease was the doctor, if he did not come down with it himself. If it had not been for this one disease the old time doctor might have gone hungry. Day after day, trip after trip, plod, plod through rain and snow, cold and sunshine for weeks and months, the doctor visited his many cases. Treatment consisted of rest in bed and purgation in the beginning. Cold baths if the temperature was above 102 or 103, every two hours called the "bran bath" treatment. Patients were placed on an almost starvation diet, such as rice water or barley water, buttermilk or skimmed milk sparingly. Egg albumin in lemonade was a favorite all through the disease. The diet was kept liquid until the temperature had been normal for seven to ten days.

Turpentine was given by some almost as a routine. We were 'high pressured' to use some supposedly intestinal antiseptic drugs. One I remember was a preparation of 'acetizone,' a strong solution put in the water; the patient was not allowed to drink any other water. I had two little girls as patients in 1904 doing well I thought. About the end of the third week I placed them on this drug and both refused to drink much of it, contrary to my wishes, and within 3 or 4 days both developed peritonitis and died. From that day to this I have never used a new drug until it had been thoroughly tested and recommended by our best authorities. Up to that time I thought I was a good 'fever doctor.' I had observed that the least medicine I gave the better off my patients were. I gave as little turpentine as possible since it was almost demanded. Some gave carbolic acid as an antiseptic. Salol was another medicine in which I could see no good. Whiskey was given almost routinely after the second or third week. It was horrible the absurd and harmful treatment given in this disease by some of the uneducated doctors; they would usually give large doses of calomel and rhubarb every two or three days. (A man who roamed our mountains and valleys had a great reputation as having a secret remedy to break typhoid fever within two or three days. His remedy was acetanilid given regularly. If the patient survived, the family could note that the temperature was low and were satisfied. If the patient died the family was accused of having given food causing the death. He very seldomly made more than one or two visits. He traveled over an area of about 50 square miles and if the patient became worse, he could not be found. Then another doctor called in emergency had to bear the responsibility since the 'great fever doctor' could not be found.)

Many cases of typhoid would run a regular course for two weeks, then show a gradual decline of fever for ten days and then relapse, again running the same course for three or four weeks. Though by this time they were living skeletons, they sometimes recovered. The cause of relapsing form was never known. We saved many patients having severe hemorrhage in the country by giving normal saline by clysis and opium.

Children's Diseases. Gastro-intestinal infections were treated first by purgation, then by an almost starvation diet. In colitis, Holt advised a purgative, then an enema and stopping all food for 24 hours followed by a liquid diet. Fischer, as late as 1915, began treatment of colitis in children with large doses of calomel.

For the children's diseases, the only treatment we had which was of much value was antitoxin for diphtheria, discovered by Berhing in 1892. This was probably the second greatest discovery in medicine, small-pox vaccine discovered by Jenner in 1798 being the first. My experience in several epidemics of diphtheria was very satisfying. By the administration of diphtheria antitoxin, and intubation in laryngeal cases, it was very unusual to have a fatal case.

For other diseases in children, our greatest aid was perhaps in advice to the parents. Still they gave all kinds of concoctions, such as hot teas, etc. They thought every little baby had hives and must be broken out with a rash. Coal oil was given for croup. Certain old persons were supposed to have a gift for cure and would be called to blow into the babies mouth to cure what they called the "thrash." There were so many peculiar methods of stopping bleeding, I haven't time to mention them.

When we were called to see children, if they had fever, calomel or castor oil or both were invariably given. I wish to say here in defense, of the doctor of this era, that we honestly thought our treatment was correct and helpful. It was thought the bowels had to be cleaned out. We might have been as near right then, as some doctors of today who so often clean out all the pelvic organs of women.

From 1897 to 1900 the operation for *appendicitis* was being used with increasing success. The reported mortality was 12 to 15 percent. If all cases had been diagnosed and reported, there is no predicting what the death rate would have shown. The textbook of choice for medical students then, was "The American Text-book of General Surgery." It was edited by several of the leading surgeons of the United States. On the treatment of acute appendicitis this book advised, "give saline purgatives until the bowels are thoroughly moved; then give an enema containing magnesium sulphate." It was not until about 1906 that the leading authorities advised that no purgatives be given; and there was no medical treatment for this disease.

We had a great deal of *malaria* in this and other states in this early period. It was very successfully treated with quinine, but we had no prophylactic measures for its eradication at that time. For *anemia* we had iron quinine and strychnine in tonic doses, nourishing food and cod liver oil. For *cancer*, we had surgery. Worthy of mention was arsenic paste used by some in skin cancer. (This has been a great field for quacks and cancer doctors, even up to the present day.) The universally used Aspirin came into use in 1909.

The 25 years following 1910 might be called the era of *prophylactic measures*—immunizing vaccines, better sanitary conditions, X-ray as an aid in early diagnosis, establishment of public health units, education of people to have repeated examinations, especially those of cancer age. In 1911 typhoid immunization had become so successful that the Army began compulsory vaccination of soldiers. From that time on people of all ages have been inoculated against this disease, until it is about wiped out in this country. If an occasional case does show up the drug Chloromycetin appears to be a cure. Diphtheria and pertussus are gradually becoming extinct, due to immunization. Tetanus is not so dreaded now. We have no yellow fever in this country due to prophylaxis. Smallpox is completely under control.

Rabies is still a problem. Many have been, and are still being vaccinated, who should not be. If a person is bitten, or if there is an abrasion or a broken skin exposed to the saliva of a supposedly rabid dog, the dog should not be killed until it is reasonably proven that it has the disease. Then, even if it takes three to five days there is time to begin treatment. Three years ago I had a fatal case of rabies vaccine encephalitis. While this does not occur but once in 7 or 8 thousand cases, it does happen. I was inoculating three others at the same time with the same product without any ill effects. This was the only case in which I ever had serious results. Though I have personally known of three cases having paralytic lesions for life due to rabies vaccine. It should not be given indiscriminately.*

The establishment of public health units was the greatest advance in prophylactic measures during this era. It was a slow process and required a great deal of effort and work by our health authorities in securing the cooperation of the people and to get financial aid in areas where county health units were established. I gave all the aid I could and observed the earnest effort and the 'never give-up' attitude of such men as our present State Health Commissioner, Dr. Hutcheson. I observed that such men would not fail. Health units were established finally all over the state. Free immunizations were given to children of school age. Better sanitary conditions were established. Homes were screened. Water supplies were examined and made as free from infection as possible. The problem of tuberculosis was attacked with vigor and great success.

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*When I was a boy my father was bitten by a supposedly rabid dog. No rabies vaccine was available at that time, so he went to a man in the mountains who had a 'mad-stone' which was stuck on the wound, and when it came off the disease was supposed to be prevented. Of course this was a fake, but was a great satisfaction to my father and his distressed family. From what I remember, the dog must have had rabies but my father was not infected.

Time does not permit me to go into the details of what has been accomplished along this line since I have been in the practice of medicine. I knew the time when hook worm disease was very prevalent in the state. In some areas a large percentage of children were infected. The State Health Department almost wiped it out within three or four years. We now very seldom see a case of the disease.

Endocrine substances derived from the ductless glands have been important factors in medicine during these years. Thyroid extract was first used by George Murrey (an Englishman) in 1891, in treatment of myxedema. Adrenalin, well known and valuable, was discovered by a Japanese chemist, Takemine, in 1901. Pituitrin derived from the posterior lobe of the pituitary gland came in use in 1909. Insulin, one of the greatest discoveries in medicine, was made by Banting and Best in 1922. Estrogenic substances appeared in 1923. An extract of the adrenal cortex, discovered by Hartman in 1930, became lifesaving in Addison's disease.

Of the last era, the past 15 or 18 years, under my observation, I shall say little because most of you, or perhaps all of you, are just as familiar with the subject, and more capable of discussing it than I. I have given you some of the old, thinking perhaps it might be new to most of you, and perhaps of interest. You will understand that I have only scratched the surface of what has been done during these years. The effort put forth to improve methods for the prevention and cure of disease, the details as to the difficulties and hardships in the fight to overcome ignorant opposition, and in securing of better equipment to go forward,—this would be a long story.

The *present age* is the antibiotic age. The use of these drugs during the last 10 years has saved more lives than any other drug in the same length of time. It is a weapon against infection in all branches of medicine and surgery, including dental surgery. It is the age of great specialists in every field of our profession. It is the vitamin age, but you cannot live on vitamins alone. They are used to correct body deficiencies in connection with a balanced diet. It is the age of the X-ray specialist for diagnosis and treatment, with the most valuable instrument ever discovered for the medical profession. Its wonderful aid in diagnosis has been made available to every member of our profession. We have the atomic age from which startling benefits may come. So far radio active iodine has been used in the treatment of Graves disease.

This is the greatest of all ages in our profession. We have gathered the choice grain from the work and inventive genius of all medical men for many centuries past. But our bin has not filled suddenly. It has been grain by grain. Some men have gone part way on an important problem, and others followed it to a successful conclusion. Men have died in the discovery of everlasting information which we now possess.

As to my part in this progress, I have never done any outstanding thing. I just have observed, thought, studied, worked and followed, using to the best of my ability the facilities at my command, adopting methods and drugs which, in my judgment were good, and discarding those I thought useless. It has been good and a great satisfaction to look back over these years and remember the time when to see a simple appendectomy or gallbladder drainage was exciting and wonderful and to observe the early thyroid surgery by the great Dr. Crile. Now we are able to see men calmly operating upon the human heart, removing an entire lung, or dissecting a tumor from the brain. And today we have eliminated in so far as possible purgatives and laxatives. We have come a long way from calomel to the antibiotics.

In conclusion, I wish to say it will be a great pleasure to me, if I am permitted to make a report to this medical organization fifty years from now.

The author shows that a test usually employed in the larger hospitals may be used satisfactorily in office practice.

THE MALE FROG PREGNANCY TEST

SAMUEL S. LAMBETH, M.D., Maryville, Tenn.

The purpose of this study and report is to discuss a simple method of performing the male frog pregnancy test and to evaluate its usefulness in office practice.

The male leopard frog, *rana pipiens*, has become popular as a test animal since this method of pregnancy testing was introduced in 1948 by Wiltberger and Miller.[1] Different opinions about the best technic for performing the test have been expressed in the reports from various laboratories. Greenblatt[2] uses a morning urine specimen. Haskins and Sherman[3] advise blood serum because of its higher gonadotrophic titer and smaller incidence of toxicity. Robbins[4] states that either urine or blood serum may be used. Marsters, Black, and Randall[5] report that urine is more satisfactory than blood because of fewer false negative results and a smaller incidence of toxic reactions.

Most of the reports on the male frog test have come from large laboratories. The author has studied the test from the standpoint of the physician in private practice, with the following objectives:

1. To decide whether the test is simple and economical enough to use as an office procedure.
2. To decide whether the test is sufficiently accurate to offer assistance to the physician in the early diagnosis of pregnancy.

The blood serum technic was chosen for study because of its simplicity and because a blood specimen is usually taken at a patient's first visit to the office. In addition, the blood serum technic has not been discussed as much as the urine method. All of the tests in this series were personally performed by the author in an effort to decide whether the blood serum technic is practical.

Important features of the technic are listed below:

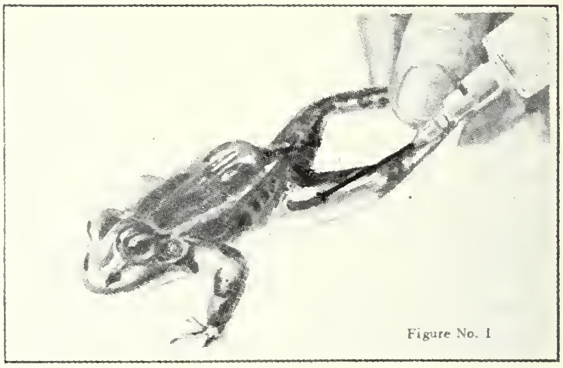

Figure No. 1

1. A two inch 22 gauge needle is used as illustrated in figure one. Passage of the needle under the skin of the thigh and upward into the dorsal lymph sac prevents leakage of serum at the site of puncture.
2. Three cubic centimeters of blood serum are used.
3. After two hours a portion of the frog's urine is collected on a glass slide by gentle compression of the cloacal region.
4. The presence of four or more motile sperm in a single high power microscopic field is regarded as a positive test. An occasional non-motile sperm may be seen when the test is negative. The number of sperm varies a great deal. Less are found in the earliest pregnancies.
5. A test is considered negative if no sperm are found after twenty-four hours. Negative test animals are then injected with 50 units of chorionic gonadotrophin.[7] If the urine becomes positive, that frog is not refractory to the pregnancy hormone.
6. Before injecting the blood serum, a specimen of the frog's urine should be examined for sperm. Occasionally, the urine reveals sperm under such circumstances.

Because this was a clinical study of a relatively new test, a few general points should be mentioned. All of the frogs were obtained from E. G. Steinhilber Company, Oshkosh, Wisconsin, by airmail express in dozen lots. They were kept in a covered enamel pan 12 in. by 9 in. by 4 in., in the bottom of an electric refrigerator. Some moss was put in the pan. The frogs were given a little tap water every two days. The water did not cover all the floor of the pan because one end was elevated about one-

Table I

Analysis of Sixty-Eight Positive Tests

Days Menses Delayed

(Number of patients listed in each group)

Causes for Delayed Diagnosis	*0-14 Days*	*15-30 Days*	*31-45 Days*	*46-60 Days*	*Indefinite or Irregular*	*Totals*
Questionable Enlargement of Uterus	9	6	2			17
Moderate Atypical Enlargement of Uterus	1	5	4		3	13
Retroverted Uterus	2	5	1	1	1	10
Cervical or Adnexal Disease	2	2			3	7
Previous Pelvic Operation	1		1	1		3
Poor Abdominal Muscle Relaxation		2	2		2	6
Obesity	1	2			2	5
Minimal Uterine Bleeding	2	3	2			7
TOTALS	18	25	12	2	11	

half inch. With such care, most of the frogs survived four weeks or longer.

Toxicity of 3cc. of blood serum for the average 25-40 Gm. frog was not a serious problem. Only three frogs died after injection. Toxicity is more frequent when the frog has been kept longer than three weeks. In this study there was less toxicity than there had been when urine was the testing material.

The evaluation of the accuracy of the frog test was made by using it for help in establishing the diagnosis for a hundred women who were personally examined by the author. The only selection of cases was the fact that the patient presented a real problem in diagnosis. No individual was included in this series for whom a definite diagnosis could be made after pelvic examination.

Sixty-eight patients had positive tests. Table I analyzes these from the standpoint of the cause of difficulty in making the diagnosis by physical examination and the extent of delay in the menstrual period. In fifty-five of sixty-eight individuals the delay was less than forty-six days. The patients in the indefinite or irregular group were those who varied a great deal in their cycles.

An interesting part of this study has been determining the factors which may interfere with an early diagnosis of pregnancy. The eight classifications are self-explanatory and cover all of the problems of this sort which have been met in my practice. It is most important to emphasize that a good pregnancy test must be more accurate than the history and physical examination. It is useless to report the results in a series of pregnancy tests unless one knows the stage of gestation in each instance. Assistance is rarely needed to diagnose a three months pregnancy. All of us frequently need help when the patient's period is only ten days late.

Table two presents the important clinical data on the thirty-two patients with negative tests. All of the patients presented in this study have been followed long enough to establish a definite diagnosis. The question of ectopic pregnancy had been considered for several of the negative group. The test was helpful in disproving this diagnosis.

The most valid objection to the male frog as a pregnancy test animal is the question of its sensitivity to the chorionic gonadotrophic hormone. It is generally considered less sensitive than the rabbit and might not diagnose a very early pregnancy or a complicated gestation such as an ectopic one. The amount of chorionic gonadotrophic hormone necessary to produce sperm in the frog's urine has been estimated as approximately fifty international units.[3] Since

Table II

ANALYSIS OF THIRTY-TWO NEGATIVE TESTS

Days Menses Delayed

(Number of patients listed in each group)

Causes for Delayed Diagnosis	*0-14 Days*	*15-30 Days*	*31-45 Days*	*46-60 Days*	*Indefinite or Irregular*	*Totals*
Questionable Enlargement of Uterus	4		1	2	3	10
Moderate Atypical Enlargement of Uterus	3	2	1	1		7
Retroverted Uterus	2		1		1	4
Cervical or Adnexal Disease	3	2		1	1	7
Previous Pelvic Operation	1					1
Poor Abdominal Muscle Relaxation	1					1
Obesity					1	1
Minimal Uterine Bleeding		1				1
TOTALS	14	5	3	4	6	

the blood serum level of this hormone at the fourth week of pregnancy is about fifty rat units per cc.,[6] and the rat unit equals the international unit,[9] theoretically the test should be routinely positive if the patient is four weeks pregnant. Actually, the determining factors are the varying levels of the hormone in normal pregnancy and the varying sensitivity of the test animal.

In keeping with these differences, the chief difficulty discovered in this study was the frequency of false negative results. Careful observation of Table III reveals that usually the test became positive before physical examination alone could make the diagnosis. Because most of the false negative reactions occurred with 4cc. of serum, the amount for routine use was reduced to 3cc., with no increased frequency of false negative results. There was no obvious seasonal variation in the false negative group.

Summary

1. A simple office technic for the male frog *(rana pipiens)* pregnancy test has been presented.

2. Blood serum was used as the test material to determine whether it is suitable. The results were satisfactory in one hundred personally performed tests.

3. The accuracy of the male frog test in very early pregnancy is its only question-

Table III

FALSE NEGATIVE GROUP

Case Number		*1. (I.M.)*	*2. (E.P.)*	*3. (B.S.)*	*4. (E.B.)*	*5. (F.C.)*	*6. (E.H.)*	*7. (L.J.)*	*8. (F.G.)*	*9. (R.E.)*
DATES	Initial Test	4/21/51	1/12/51	8/27/51	9/28/51	4/11/52	4/3/51	6/25/51	4/23/52	11/24/51
	Repeat Test	4/28/51	1/20/51	None	10/12/51	4/14/52	4/14/51	8/8/51	4/30/52	12/10/51
DAYS LATE	Initial Test	13	26	16	8	7	3	Indefinite	5	4
	Repeat Test	20	34	None	22	17	14	Indefinite	12	20
AMOUNT OF BLOOD SERUM	Initial Test	4cc.	4cc.	4cc.	4cc.	3cc.	4cc.	4cc.	3cc.	3cc.
	Repeat Test	3cc.	2.8cc.	None	4cc.	3cc.	4cc.	4cc.	3cc.	2cc.
RESULT	Initial Test	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative	Negative
	Repeat Test	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive
COMMENT		None	Aborted Later	Aborted Later	None	Threatened Abortion	None	Lactating Delivery four months previously	None	None

able characteristic. False negative results have been presented in table form. False positive tests were not encountered in this series although they are mentioned in the literature.[8]

4. Personal observations permit the author to conclude that the male frog test with blood serum is a good office procedure to assist the practicing physician in establishing the presence or absence of pregnancy before he could do so by the physical examination.

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The controversy as to the part played by the lipid content of the diet in the pathogenesis of atherosclerosis has as yet not been settled conclusively. The paper under consideration apparently sheds some light on this important and practical question. The authors fed tritium-labeled cholesterol to four patients, analyzing the serum, red blood cells and feces for the presence of this radioactive material. One of their patients, a 62 year old man, had a massive cerebral hemorrhage and succumbed 43 days after tritium-labeled cholesterol was given by stomach tube. Except for a short period of small oral feedings, all nutrition was given by injection during this period. Autopsy was performed and significant amounts of the tritium-labeled cholesterol were present in the atherosclerotic intima of the aorta. Hence, one may conclude that, under the conditions stated, exogenous cholesterol may enter into the metabolism of the human atherosclerotic aorta. Further investigative work along this same line is certainly indicated. (Abstracted for the Middle Tennessee Heart Association by John L. Shapiro, M.D., Nashville.)

The profession of the State can review with satisfaction what has been accomplished in the rehabilitation of handicapped children, especially since its State Medical Association has either sponsored the legislation or has, in all moves, lent its support to the program.

GROWTH OF SPECIALIZED PROGRAMS FOR TENNESSEE CHILDREN*

ROBERT M. FOOTE, M.D.,† Nashville, Tenn.

When one compares long established concepts of public health practices and responsibilities with programs for the care of crippled and physically handicapped children, one realizes that children programs are yet infants in the field. Despite their recent beginnings, however, these programs for crippled children are assuming rapid maturity and a new stature as our dynamic society evolves clearer definition of the physically handicapped person, the relationship of his disease to preventive medicine and the realization that here is an opportunity to conserve our greatest single natural resource. A review of recent scientific programs and the medical literature has revealed that the fascinating story of development of children's programs has received surprisingly little treatment and only scattered emphasis. It is my purpose, therefore, to present the growth and development of specialized programs for the children of the State of Tennessee, not that our programs are unique, particularly, but that they may reflect the changing social order of which we are a part.

It was in the year 1877 that the Tennessee State Medical Association sponsored legislation which created the Tennessee Department of Public Health. (1) It was fifty-two years later, in 1929, that a crippled child was first defined and public funds appropriated for his care, and sixty years later, 1937, that the Tennessee Department of Public Health was given full authority to develop and conduct a state-wide crippled children's service. The events in the decade preceding 1929 reveal a fascinating story of local leadership and farsighted comprehension on the part of certain men of medicine and laymen of the real impact of the physically handicapped on society. (2) Of these pioneers, the first was Dr. Willis Campbell, orthopedic surgeon, who in 1919 stimulated the Good Deeds Circle of the Kings Daughters of Memphis to establish the Crippled Children's Hospital School of Memphis, an institution which today proudly enjoys the satisfaction of having rendered thirty-three years of uninterrupted service to the crippled children of West Tennessee. Four years later, Dr. Campbell's inspired devotion was instrumental in the establishment of the Hospital for Crippled Adults in Memphis by the Rotary Club, a hospital exclusively for crippled persons over sixteen years of age. Simultaneously Dr. Adam Nichol, an orthopedic surgeon of Nashville, interested the Junior League in the problem of the crippled child and in the Fall of 1923 the Junior League Home for Crippled Children was opened in his city. This hospital, now a fifty bed convalescent institution of the finest type, continues to render its service to and receive almost phenomenal support from the citizens of Middle Tennessee.

Although there were manifestations of concern for the crippled child in other communities, specific projects did not materialize on a state-wide basis until the Tennessee Society for Crippled Children was organized in 1923, supported by the Rotary Club and by the International Society for Crippled Children. The Tennessee Society for Crippled Children focused attention on the specific needs of crippled children and mobilized interest and support for legislation which first came in 1925. This support was feeble and ineffective because no definition of a crippled child was formulated, no funds appropriated and no administrative organization set forth to encourage local participation or financing. The Tennessee Society, however, kept before the public the needs of the crippled child, the limitations of permissive legislation, and through the organization and coordination of private activities throughout the State, prepared the way for subsequent and more effective legislation. This came in 1929 with a passage of the "Crippled Children's Act of 1929," which legally set forth a definition of a crippled child and provided for State financial participation to the extent of $35,000. Administrative responsibility was divided, however, among three State departments with no commission or advisory group to act as coordinator. As a consequence of this disorganization therefore, the state legislature four years later failed to make an appropriation for this program. In 1934, the American Legion recognized the needs of crippled children and with financial backing from the Civil Works Authority sponsored a survey to enumerate the crippled children of Tennessee. The facts and figures published as a result of this survey created public interest such that in 1935 the Crippled Children's Act of 1929 was amended, vesting the administration of the Crippled Children's Program in a commission established in the ex-serviceman's Bureau of the Adjutant General's office. State funds were appropriated, making Tennessee one of the first States to receive federal participation made possible by the Social Security Act, this Federal-State financing commencing in 1936. Finally, in 1937, Crippled Children's Service was placed in the Tennessee Department of Public Health for a variety of reasons, not the least of which was that the department had long been concerned with the crippled child and his medical problems but had been without authority to act effectively in his behalf.

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†From the Division of Maternal and Child Health Services, Tennessee Department of Public Health.

Since 1937 the program has experienced phenomenal growth. On January 1, 1940 there were 3,525 crippled children on register and under treatment by Crippled Children's Service, whereas, on January 1, 1952 twelve years later, there were 13,713. This latter figure does not include the speech and hearing defective children. The program has increased measurably in scope also as it has increased numerically. It is interestingly significant that the term "Crippled" to most people connotes an obvious skeletal defect wherein the ability to sit, stand or ambulate is impaired and that the pioneers in the movement in behalf of crippled children were orthopedic surgeons. Recently, broader concepts have evolved which tend to make the word "crippled" and the word "handicapped" synonymous. Witness to this fact is an amendment to the Crippled Children's Act of 1929, passed by the 1951 legislature upon recommendation of the Tennessee State Medical Association and other interested groups, which re-defines a crippled child thus: "A physically handicapped or crippled child is one under 21 years of age who shall be deemed "chronically handicapped," by any reason of physical, mental or emotional infirmity, whether congenital or acquired, as a result of accident, or disease which requires medical, surgical, dental, visual, or mental treatment and rehabilitation, and is or may be totally or partially incapacitated for the receipt of a normal education or for self support: provided, this definition shall not include those totally blind, deaf or dumb; nor shall this definition include children who are diagnosed as idiots, imbeciles, feeble-minded, morons or insane." It is important to point out also that each new responsibility given to the Tennessee Department of Public Health has come either directly from organized medicine or from society wherein the medical profession has acted as counselor or spokesman. A program, therefore, that began almost solely within the specialty of orthopedics has grown to encompass a whole host of chronic disorders of children requiring the services of all varieties of medical specialists.

Because Tennessee is essentially rural and medical specialists are concentrated in urban areas, clinical centers for the treatment of crippled children are located in the urban areas of Memphis, Nashville, Chattanooga, Knoxville and Johnson City. The state program has been divided into five regions, utilizing the specialists and encouraging the development of auxiliary services in each region. Children living within these geographical areas come to the urban regional centers for their care. Each provides outpatient clinical service, hospitalization, convalescent care, physical therapy, necessary appliances and auxiliary services. Case finding and follow-up are provided by local health departments.

Services were first limited to children with orthopedic disabilities. Shortly thereafter children with certain congenital malformations and traumatic conditions such as burns came to be considered crippled and a program was developed in the field of plastic and reconstructive surgery. Later still, a diversified group of chronic pediatric disorders came to be recognized also as crippling, yet they were neither orthopedic nor plastic in nature. These include bizarre congenital malformations, diseases of the nervous system, diseases of the gastrointestinal, diseases of the genitourinary system, etc. Specialized services for children with these handicaps were provided. More recently, even more definitive disorders have been included in the program, which will be considered in some detail later in this presentation.

We, in Tennessee, recognize that services are not yet complete. Especially do we need a program for children with rheumatic fever and abnormalities of the cardiovascular system, and a program for epileptic children. Those who see so clearly these needs are working toward them and are hopeful that funds and personnel will be forthcoming soon. The medical profession is already allied with us in these endeavors.

Time and space do not permit a detailed presentation of the total operation of Tennessee's program for handicapped children, but I should like to describe briefly two facets which are bringing new hope to as yet uncounted numbers of children.

The first, in the area of plastic surgery, stemmed from the realization that defects about the face exert such a tremendous impact upon the over-all development and life adjustment of the individual and that a more satisfactory and complete rehabilitation program was needed for the many children with cleft palates and cleft lip deformities. A special cleft palate clinic was instituted in Memphis in May, 1951, utilizing a team approach to the problem. Plastic surgeons, pediatricians, orthodontists, prosthodontists, nurses, and speech correctionists constitute this team, thus carrying forward the concept that the child as a whole needs attention in addition to the abnormally constituted and mal-functioning organ or part. The team, sitting together in a clinic, evaluates each patient, develops the long range therapeutic program and decides the priority for each specialist's services. On the basis of a most gratifying response to this type new clinic, similar ones are now operating in Nashville and Knoxville thereby making such service available to all areas of the state. The dental profession is allied with the medical profession in this endeavor. In addition to providing service, research into the cause of this type of congenital malformation is being conducted through these clinics.

The second new development that I should like to describe is in the field of speech and hearing conservation. I shall present the development of a state-wide coordinated public health program for the speech and hearing defective, in which an attempt is being made to define the magnitude of the problem in the population,[3] to evaluate different methods of case finding, and to describe the responsibility and leadership that a public health agency can assume in this field. The Tennessee State Medical Association, supporting the Tennessee Hearing and Speech Foundation,[4] sponsored legislation in 1951 which charged the Crippled Children's Service, Tennessee Department of Public Health, with the development and operation of a state-wide program, the purpose of which was to find, treat and rehabilitate persons, especially children, handicapped by defects of speech and/or hearing. The Tennessee Department of Public Health has full responsibility for phase one of this program, case finding, which is being accomplished through qualified speech, and hearing consultants testing children in all areas of the state. Phase two is concerned with necessary medical care[5] and includes specialized services provided by speech and hearing clinics under the Tennessee Hearing and Speech Foundation with which the Tennessee Department of Public Health is cooperating. Children from medically indigent families are provided these services by Crippled Children's Service, Tennessee Department of Public Health.

Phase three is concerned with education and is the assigned responsibility of the State Department of Education. The intimate coordination of this three-phase program has made an extensive service and training program a reality.[6]

The magnitude of the problem of speech and hearing defects has been shown by case finding surveys in ten counties of Tennessee among elementary school children, three different case finding methods being used. A complete mass survey made in four counties by Public Health Department consultants testing approximately 15,000 children revealed 8.9 per cent children with speech defects and 13.8 per cent children with hearing defects. In all, 21.4 per cent had either speech or hearing defects requiring observation, special education, or medical or clinical treatment. A second case finding method has been to furnish the regular teachers with symptoms and signs which might point to hearing loss or a speech deviation. Using these sheets as a guide, the teacher refers all children whom she suspects. These are then screened by Public Health Department consultants. By this method 2.7 per cent of children were found to have speech defects and 2.1 per cent of children have been found to have hearing defects.

Considering only major or medically critical defects, by mass survey there were 1.5 per cent of children found to have major speech defects and 3.3 per cent of children found to have major hearing defects. By case finding methods utilizing the symptom sheet, 1.0 per cent of children were found to have major speech defects and 1.1 per cent of children found to have major hearing defects. By teacher referral without preparation or guidance, 0.5 per cent of children were found to have major speech defects and 0.9 per cent of children were found to have major hearing defects.

Comparison of various case finding methods has revealed complete mass survey examination of all children by qualified Public Health Department consultants to be the most effective, especially in discovering minor defects in both speech and hearing. However, in the case of major speech defects, referral by teachers using the symptom sheet as a guide was nearly as effective. This was not true in the case of hearing defects. Major hearing defects are apparently not being recognized by teachers and it seems valid to assume, therefore, that only through complete mass survey by Public Health Department consultants will the true magnitude of the problem be discovered.

It is important to point out also that total speech defects, numerous in the early school-age groups, tend to diminish slowly as age increases. Early treatment of these would certainly hasten the fall of this diminishing curve so that speech defects would not carry over into the upper elementary grades. It would be expected that this treatment would also improve the school adjustment and the academic progress of these children. Major speech disorders, however, remain fairly constant, indicating certainly that the major speech disorder needs aggressive attention. Contrastingly, total hearing defects tend to increase with age as do also major hearing defects. This would seem to support the contention that it is important to find hearing defects early and treat them well, and further, that lack of care in early age compounds the problem as time progresses.

The contributions that public health agencies can make in programs of this kind are many and valuable. It appears that the problem is universal and too great for uncoordinated efforts to be effective. Further, public health programs can discover causes of these defects and thereupon develop methods of prevention. It is also an accepted public health responsibility to insure necessary services so that children will not be hampered in receipt of normal education leading to eventual self-support and responsible citizenship. Public health programs can provide case finding services to all economic components of our population, can refer to private physicians those cases able to afford indicated treatment, and can provide necessary services for those children whose families cannot afford private medical care. Public health agencies can also support private movements in the field of speech and hearing rehabilitation and can stimulate interest widely toward the development of additional services. Further, public health agencies are accustomed to working with the medical profession and are adapted to utilizing local community resources. Thereby, they can develop programs broad in scope which will insure that all medical and clinical services are available and that rehabilitation of the individual is completely satisfactory.

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Tumors of the salivary glands pose problems in diagnosis and management. Certainly, the surgical attack must be in the hands of one skilled in surgery of the face and neck to reduce to the minimum recurrence of tumors and trauma to the seventh nerve.

TUMORS OF SALIVARY GLAND ORIGIN*

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Tumors of salivary gland origin, though uncommon, are not rare and comprise approximately 2 per cent of all tumors. Inasmuch as the rate of recurrence following surgical removal of benign tumors varies between 20 and 45 per cent, it is evident that this condition presents numerous problems in diagnosis and treatment. It is the purpose of this discussion to clarify these problems.

It is not unusual for us to see patients in whom a primary salivary gland tumor has been incompletely removed because of a mistaken diagnosis of an enlarged lymph node. Or, the operation may have been incomplete because preoperatively the surgeon failed to evaluate the extent of the disease and at the time of operation found a situation which was beyond his operative ability. In other instances such tumors have been incised and drained by an attending physician who thought that the swelling was an abscess. In still other circumstances, teeth have been extracted, and tonsils and adenoids have been condemned and removed under the impression that these organs were the primary source of an infection producing a regional lymphadenopathy.

Since Bilroth described the surgical pathology of salivary gland tumors, and Virchow introduced the term *mixed tumor*, the literature has been voluminous on this subject. Nevertheless, there still exist differences of opinion as to the histogenesis, classification, criteria of benignancy and malignancy, and methods of treatment of these tumors. With this backgroud in mind we have surveyed much of the literature and reviewed the records of 132 patients with this condition who have been seen in this Division during the past thirteen years.

Location of the Tumor

The preference of salivary gland tumors for the parotid gland is well known. In our series the parotid gland was involved 84 times, the submaxillary 21 times, the submental once and the oral cavity 26 times. Two of the patients had more than one of the major salivary glands involved at the time of admission.

Salivary gland tumors have also been reported in the nose, nasopharynx, cheek, lip, lacrimal gland, scalp, lungs, cervix uteri, breast, middle ear, and paranasal sinuses. In these regions, as well as in the oral cavity, the tumors arise from the glandular epithelium lining these various cavities. In the oral cavity there are approximately 400 accessary salivary glands, any one of which may give rise to a neoplasm. The hard palate is the most common site of origin, and by the time the patient seeks medical attention, the tumor has frequently extended to the soft palate or to the alveolar ridge.

One must also consider the possibility of intra-oral extension of a primary major salivary gland tumor. This was exemplified by a 22 year old white male who presented a large tumor in the left lateral oral pharyngeal wall. External palpation of the adjacent parotid gland was negative. At operation the tumor was found to be a medical extension of a primary mixed tumor of the left parotid gland and not a true pharyngeal lesion. The differential diagnosis of a primary tumor of the submaxillary and submental glands from a primary tumor of the floor of the mouth is difficult and should not be overlooked.

Age, Sex, and Duration of Disease

Tumors of salivary gland origin may occur at any age. They have been reported in children at birth and in adults as late as 84 years. Stein and Geschickter state that most of their patients with mixed tumors were between the ages of 20 and 40 years, while the patients with cancer of salivary gland origin were over 45 years of age. In our group of 132 cases the average age of patients with benign mixed tumors was 45.3 years, and the average age of those with cancer was 45.6 years.

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The average length of time elapsing between the appearance of a benign mixed tumor and the time of operation was 9.8 years, while the average time elapsing before operation in patients with cancer was 6.6 years. Two patients with benign lesions gave a history of having had a mass for 45 and 31 years respectively before treatment, while one patient with adenocarcinoma had noticed the presence of a mass for 32 years prior to operation. From these observations we feel that the differential diagnosis between mixed tumors and carcinomas of salivary gland origin cannot be based upon the age of the patient and the duration of the disease.

The sex incidence was not statistically significant in our series. There were 62 male and 70 female patients.

Signs and Symptoms

The correct diagnosis of a salivary gland tumor should offer little difficulty. However, the differentiation between benign and malignant growths preoperatively not infrequently is difficult and occasionally impossible. The diagnosis is extremely important since the ultimate successful management of the tumor is based upon it. From a clinical standpoint there are factors which may assist in this differentiation.

Rate of Growth

Of 93 patients whose tumors were classified as benign, 81 stated that there was little or slow growth. Nine patients stated that the initial growth developed slowly and was followed by a sudden, rapid growth, or that the growth was rapid from the onset. Of the 39 patients whose tumors were classified as cancer, 21 stated that the tumor slowly increased in size. Eight felt that the rate of growth was rapid from the onset. One patient had a carcinoma of the submaxillary gland 11 years before removal was attempted under local anesthesia as an office procedure. The tumor promptly recurred, and the patient died of his disease. In the remaining 9 cases the rate of growth was not recorded. Thus it would seem that the rate of growth is not significant since in our group of benign tumors, 1 in 9 showed rapid growth while in the malignant group, 1 in 5 showed a rapid increase in size. In general, benign tumors grow more slowly than the malignant ones. The variation in the rates of growth of both the benign and malignant tumors is in all probability dependent upon the variable histopathology of the tumor, its blood supply, and the presence or absence of degenerative changes.

Pain

Pain is not a reliable symptom in the diagnosis of salivary gland tumors. Unless ulceration and secondary infection are present in patients with benign tumors, pain is usually negligible. Twenty-three of 93 patients with benign mixed tumors experienced some type of vague disturbance. One complained of pain on exposure to cold, another of a stinging sensation of 3 or 4 months' duration, and still another of a drawing sensation radiating to the postauricular region. Ackerman and Regoto report pain in one-third of their patients with carcinoma of salivary gland origin. This pain is secondary to perineural invasion by cancer, to ulceration and secondary infection, to invasion of the adjacent periosteum and bony structures, and to invasion of the masseter and pterygoid muscles with the production of trismus. In most instances the pain is usually local in character and not related to mastication unless the associated muscles, tendons, bones or joints are involved. Twenty of the 39 cases with cancer had ulcerative lesions when first seen in the clinic. Eight of these were intraoral lesions where, as a result of continued trauma, secondary infection occurs relatively early.

Trauma

Two patients gave a history of trauma to the face as a result of automobile accidents. Later a tumor was detected in the parotid gland. Both patients claimed to have been struck at the site of the tumor. In neither instance was an abrasion or discoloration of the skin present. We are of the opinion that trauma played no part in the development of the tumor but simply served to direct the patient's attention to a previously existing lesion. Since these tumors are peripherally located, it is not surprising that the patient would associate trauma with their origin and development.

Paralysis of the Seventh Nerve

Ahlbom reported that 2 in 104 cases of benign tumors of the parotid gland had seventh nerve paralysis. Ackerman and Regoto report facial nerve paralysis in one-third of their malignant parotid cases. In our group there was only one. This is not surprising, for benign tumors are usually well encapsulated, displacing and compressing, but not invading adjacent structures as they increase in size. Paralysis occurs as a result of direct invasion of the facial nerve by tumor.

Dysphagia and Dysphonia

Dysphagia and dysphonia occur very rarely. These symptoms result from the medial extension of a parotid tumor toward the pharynx and were observed in only one of our patients.

Swelling

The presence of swelling in the region of one of the major salivary glands or the oral cavity is the predominant sign in all cases of salivary gland tumors. When the tumor involves the parotid or submaxillary gland, inspection reveals a slight fullness, a small visible mass, or a large tumor measuring up to 10 to 12 cm. in its greatest diameter. Occasionally these tumors are so small that there is no visible evidence of disease. As a general rule, benign tumors are well circumscribed, resilient, firm, nontender, smooth surfaced, freely movable, and lobulated. The mass is usually subcutaneous and not adherent to the skin. Most frequently the tumor is located anterior to the tragus of the ear, although it may extend retro-auricularly or medially between the ascending ramus of the mandible and the mastoid process. The possibility that the small tumor may be a lymph node must be considered.

Of 93 mixed tumors, 22 were recorded as being lobulated on palpation. Six of these were cystic. The consistency of these tumors again is dependent upon their cellularity and degree of degeneration.

Carcinoma of parotid gland origin, on the other hand, usually develops as a small lump anterior to the tragus of the ear. Slight induration may be noted. The skin may be adherent to the tumor. As the tumor gradually increases in size, it becomes firm, fixed and irregular in shape. Since the tumor is usually not encapsulated, as are benign tumors, it infiltrates the adjacent soft tissue and bone structure. The skin may ulcerate and become secondarily infected. The mandible, mastoid process, and base of the skull may become eroded. The 7th, 9th, 10th, 11th, and 12th nerves, as well as the carotid artery and jugular vein may become involved by the disease. Of 37 patients with cancer, 4 had lobulated tumors, and 5 showed evidence of cystic degeneration.

Fixation

We frequently think of fixation of a tumor as being of some diagnostic significance in the determination of malignancy. It is our opinion that this finding is of great importance in the differential diagnosis of salivary gland tumors. In those cases where the presence or absence of fixation was noted, we found that 7 of 59 (1 in 9) mixed tumors showed some degree of fixation. All had had previous surgery. Six of 20 carcinomas (1 in 3) showed fixation.

Regional Lymphadenopathy

Benign mixed tumors do not metastasize. Regional lymph node metastasis secondary to a primary carcinoma of salivary gland origin in our experience is rare, occurring in only 2 of 39 patients. Regional lymphadenopathy secondary to an ulcerated and secondarily infected lesion is common and occurred frequently in the carcinoma group. A third patient had distant metastasis to the lungs without evidence of regional lymph node involvement. Blood borne metastasis in patients dying of salvary cancer is not uncommon.

Diagnosis

When the physician is confronted by a patient with a swelling in the salivary gland region, he must first determine whether the swelling is a neoplasm. If he can exclude calculus, infection and trauma, the swelling unquestionably is neoplastic in origin.

Having concluded that there is a neoplasm, one must ascertain whether the tumor is primary or secondary. This can be accomplished only by a complete history and careful examination, special attention being directed to the scalp, external auditory canal, pharynx, and oral cavity. Lymphatic spread of cancer from these sites is to the lymph nodes adjacent to the major salivary gland. In rare instances a biopsy may be necessary to make the differentiation.

When the tumor is classified as a primary tumor of salivary gland origin, it is desirable to determine whether it is benign or malignant. This is the most difficult part of the diagnosis. As has been stated earlier in this discussion, sex, age, duration of disease, and the size of the tumor are of little assistance. Rapidity of growth and pain are slightly more common in cancer than in benign tumors. The only significant characteristic which we have encountered in malignancies of salivary gland origin is fixation. Its absence does not exclude cancer, but its presence makes the diagnosis of cancer most likely. We have never seen fixation in a primary untreated benign salivary gland tumor.

When ulceration is present we recommend an adequate biopsy from the ulcerated area, but a formal biopsy is not recommended on non-ulcerative lesions. In the absence of ulceration, adequate biopsy material may be obtained by aspiration. Not only can solid material be secured for study, but fluids, if present, can also be obtained and cultured for tuberculosis, fungi, and the pyogens. Care must be taken to insert the aspirating needle only through skin that will be sacrificed at surgery.

The presence of regional lymph node enlargement suggests a primary malignant tumor, though the lymphadenopathy is usually due to infection of the tumor or skin. Metastatic tumor if present must be taken into consideration in planning definitive therapy.

Treatment

The intelligent and successful management of tumors of salivary gland origin depends upon the appreciation of eight factors.

First, a thorough knowledge of the anatomy of the operative field is of prime importance. This is especially applicable to the management of benign tumors in the parotid and submaxillary gland regions where the facial, lingual and hypoglossal nerves are encountered. Lack of this knowledge may result in permanent damage to one or more of these nerves or incomplete excision of the primary tumor. In more than one instance, the surgeon, fearing injury to the facial nerve, has attempted to excise a benign parotid tumor without an adequate margin of normal tissue, resulting in a rupture of the capsule, thereby permitting tumor tissue to contaminate and implant itself in the operative field. Complete removal of a salivary gland tumor with the smallest incidence of nerve injury can best be accomplished at the time of the first operation. Injury to the facial nerve usually produces a marked asymmetry of the face. Conjunctivitis and corneal ulceration occur. When the mandibular branch is severed, the lower lip is paralyzed, and the patient continually drools saliva. When the lingual nerve is injured the patient has difficulty in speaking and frequently bites his tongue. Injury to the hypoglossal nerve produces paralysis of one-half of the tongue. Most patients overcome this disability unless both nerves are involved. However, in the presence of known cancer, if the removal of these nerves will increase the possibility of completely eradicating the disease, we do not hesitate to sacrifice them. Prior to surgery we make it a point to inform the patient of these possible sequellae.

Second, an accurate preoperative diagnosis and the availability of a competent pathologist for consultation are desirable. The diagnosis in most instances is not difficult, especially if adequate biopsy material is available for study. The pathologist is not disturbed concerning the diagnosis of an obvious mixed tumor or an obvious carcinoma. On the other hand, the histopathology of some mixed tumors is variable and offers considerable difficulty in accurately prognosticating a given tumor's potentialities even on permanent section. Frozen section and aspiration biopsy material may be even more difficult to interpret. If there is a question as to the benignancy or malignancy of the tumor, we believe the lesion should be treated as if it were cancer.

Third, an evaluation of the extent of disease and the general condition of the patient are important. Palpation of the tumor, thorough examination of the pharynx, and X-ray films of the mastoid, mandible, base of skull and chest will in most instances give an answer to this problem. Patients with lesions involving the base of the skull, internal carotid artery, chest, mediastinum, brain, and the 9th, 10th, and 11th nerves are usually considered inoperable. These patients, as well as those whose general physical condition will not permit an extensive procedure, are candidates for palliative treatment only.

Fourth, a knowledge of the important characteristics of mixed tumors is imperative because they profoundly influence the surgical management of mixed tumors. As the neoplasm progressively increases in size, it follows the course of least resistance and displaces, but does not invade, the adjacent structures. The neighboring structures are compressed. In no instance at the time of first operation have we found perineural invasion by a mixed tumor. This characteristic is dependent upon the usual existence of a well defined capsule. Microscopic examination of this capsule, however, not infrequently exhibits mixed tumor cells, and examination of the adjacent salivary gland tissue may show satellite cells or embryonal foci. These facts may account for the high rate of recurrence following excision of the primary tumor and may explain the presence of multiple mixed tumors in the same salivary gland. Be this as it may, it is our opinion that the most frequent and important cause for recurrence following primary excision of a mixed tumor is inadvertent rupture of the capsule or incomplete excision of the tumor. If rupture of the capsule occurs, it is advisable to flush thoroughly the operative wound with saline. It is evident that one can markedly reduce the rate of recurrence by removing the tumor with its capsule and a margin of normal tissue in continuity. To do this and preserve the seventh nerve, we have found it advisable to excise the entire superficial lobe of the parotid gland external to the seventh nerve. This procedure is best accomplished by first identifying the main trunk of the nerve and removing all parotid tissue and tumor lateral to it. Such an approach to the problem may again prove advantageous when one is faced with a small tumor whose capsule is not too well defined at operation. If a parotid lobectomy is performed and the tumor is eventually diagnosed cancinoma, there is a good chance that the patient will remain free of disease. Excision of mixed tumors of the submaxillary or submental region is performed with the same general principle in mind. The entire gland is removed with the tumor. Mixed tumors of the hard palate are also excised with a margin of normal tissue. It is imperative that the underlying bone be removed in continuity with the tumor. The procedure of peeling these lesions from the hard palate cannot be too severely condemned. It gives only temporary relief while actually disseminating disease. The resulting defect is repaired by a prosthesis constructed by an interested dentist. Mixed tumors located on the base of the tongue are best approached by an infra or suprahyoid pharyngotomy.

Fifth, in contrast to mixed tumors, cancer of the salivary glands does not follow the course of least resistance in its growth. It invades adjacent structures rather than displaces them. Thus perineural invasion is not rare. The adjacent soft tissue and bony structures may be invaded. Cancer of the salivary gland is usually not encapsulated, though in its early stage of growth it may be and under such circumstances it is impossible to distinguish it from a mixed tumor. Again the tumor with a margin of normal tissue should be excised. If the facial or any other nerve is infiltrated by tumor it should be sacrificed. In the event there is an associated cervical lymphadenopathy, a complete neck dissection combined with removal of the primary tumor is the procedure of choice.

Sixth, in general, mixed tumors and carcinomas of salivary gland origin are not radiosensitive. X-ray treatment should be employed only as a palliative procedure and restricted to those cases where surgical removal would jeopardize the life of the patient. It must never be relied upon to destroy tumor left behind by inadequate excision.

Seventh, the choice of anesthesia is paramount. Though we occasionally use regional and local block anesthesia, we have limited its use to those patients in whom a general anesthesia is contraindicated. Drapes can be applied in such a manner that the anesthesiologist's view of the patient's face will be unobstructed. The surgeon can thus be informed of any twitching of the face resulting from stimulation of the facial nerve. This is a warning to the surgeon that he is traumatizing the nerve. Through close cooperation with the anesthesiologist we have had no permanent facial nerve damage except in those cases in which we knowingly and intentionally sacrificed a portion of the nerve. Local novocaine anesthesia blocks the transmission of nerve impulses and eliminates the normal response of the nerve to trauma.

Eighth, it is advisable to identify and isolate the 7th nerve in most cases of benign tumors. This is best accomplished by identifying the mandibular branch of the facial nerve beneath the platysma muscle just below and parallel to the horizontal ramus of the mandible. This branch is followed posteriorly to the main trunk of the nerve. The nerve can also be identified initially at its exit from the stylomastoid foramen. When the nerve is identified, all of the salivary gland tissue lateral to it can be excised without fear of injury. An excellent lighting arrangement, a magnifying loop, and a faradic nerve stimulator may be helpful in accomplishing this dissection.

Summary

1. A statistical analysis of 132 cases of salivary gland tumors has been presented.

2. The age, sex, and duration of disease are of little assistance in determining the benignancy or malignancy of the tumor. The rapidity of growth, pain, paralysis of the facial nerve, regional lymphadenopathy, fixation and ulceration of the tumor are more common in cancer of salivary gland origin than in the benign tumor group.

3. We feel that the recurrence rate of salivary gland tumors can be reduced if, at the first operation, the tumor with its capsule and a margin of normal tissue are removed. The facial, lingual, and hypoglossal nerves are preserved when the tumor is benign.

4. To avoid unnecessary injury to the facial nerve, a surgical approach has been described.

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STAFF CONFERENCE

VANDERBILT UNIVERSITY SCHOOL OF MEDICINE*

Carcinoma of the Thyroid

DR. BARTON McSWAIN: We've been asked to discuss today the subject of carcinoma of the thyroid. I want to talk about our findings in this institution in the carcinomas of the thyroid in regard to their relative frequency. Dr. Diveley and I reported our experiences with them in *Surgery* in 1948. At that time we found that there had been twenty-three patients with carcinoma of the thryroid. These carcinomas were found among 1,168 surgical specimens of the thyroid gland; thus finding carcinoma in about two per cent of all patients who had operations upon the thyroid. Since that time, there have been eight more carcinomas of the thyroid, making a total of thirty-one which have been seen in this institution in a period of a quarter of a century. As far as age incidence is concerned, those in our group ranged from thirteen to seventy. I think that it should be pointed out that this is a cancer that is relatively frequent in children. Winship in the Transactions of the American Goiter Association in 1951, reviewed the literature and found that about a hundred had been reported in children. Of course, this means there have been a good many more carcinomas of the thyroid in children than that because all of them are certainly not reported. As far as sex incidence is concerned, we found that there are about three times as many in women as in men. Dr. Shofner published a paper on carcinoma of the thyroid in the American Surgeon in 1951, and I should like for him to continue with this subject of the relative frequency of carcinoma of the thyroid.

DR. N. S. SHOFNER: In 1951, I reviewed my cases of carcinoma of the thyroid and found that in a group of 917 cases of nodular goiter, of which 741 were non-toxic, there were 42 cases of carcinoma. That made a percentage of 5.9 of cancer in all non-toxic nodular goiters. In a total of 1,578 thyroidectomies, regardless of type, there were 42 malignant tumors, making a percentage of 2.66 of all specimens, which is fairly well in line with Dr. McSwain's and Dr. Diveley's findings. As to the sex incidence, out of these 42 cases of mine, there were only two males; one was a little boy nine years old, and one was a man 71 years old. In regard to age, my youngest patient was a little girl of seven and the oldest was a woman of 76, which is considerably in contrast to Cole's report,[1] who stated that carcinoma is three times as likely to develop in men with non-toxic nodular goiters as it is in women.

DR. McSWAIN: Dr. Diveley, would you tell us about the clinical manifestations?

DR. WALTER DIVELEY: Carcinoma of the thyroid may produce no symptoms at all. Most of them are symptomless except for a lump in the neck. Other symptoms which may occur are those which may be present with the ordinary goiters. Pressure symptoms may occur with pressure on the trachea, on the recurrent laryngeal nerve, or even on the esophagus. Pain is not a common symptom unless the lesion is extremely large. Carcinoma of the thyroid gland may be present in thyroid glands where certain symptoms are present but are not necessarily due to the carcinoma itself. For example, carcinoma is uncommonly seen in patients with toxic goiters. In our series, two of 23 cases who had unmistakable carcinoma of the thyroid gland had hyperthyroidism. Even more uncommonly is carcinoma of the thyroid gland associated with hypothyroidism, but we had one such patient. There is no certain symptom in the relatively early lesion which we could hope to cure by present day methods, nor is there any definite symptom complex which is entirely characteristic of carcinoma of the thyroid gland. As far as the signs are concerned, the commonest sign is some enlargement of the thyroid gland, either a diffuse or nodular goiter, or solitary nodule, but thyroid enlargement need not be present. A sign of importance, which should make us suspect carcinoma of the thyroid, is a definite change in size, particularly a rapid change in size of the gland. However, this can also occur in non-toxic, non-malignant lesions of the thyroid. Something that was of interest to us in our series of cases concerned the consistency of the thyroid gland. In only slightly over one-half of them were the tumors described clinically as being hard. A lesser number was described as being soft in consistency. Fixation is not always a reliable sign in the diagnosis of malignant tumors of the thyroid gland. Riedel's struma certainly may give a large degree of fixation. Fixation should suggest the possibility of, but isn't necessarily diagnostic of, carcinoma of the thyroid. There is the carcinoma of the thyroid without visible or palpable enlargement of the thyroid gland seen with cervical metastases, commonly referred to as the so-called lateral aberrant thyroid, which in most or all instances represents metastatic carcinoma to a cervical lymph node from the thyroid gland. In these instances, the gland may not be visibly or palpably enlarged.

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DR. McSWAIN: In discussing the pathology of carcinoma of the thyroid gland, it should be pointed out that such carcinomas spread not only by the lymphatics, but by the blood stream. As far as the most important gross pathologic manifestation is concerned, this was included in Dr. Diveley's statements about the consistency of carcinoma of the thyroid. Microscopically, most of them are adenocarcinomas; some of them are papillary adenocarcinomas; some are alveolar adenocarcinomas and some are purely acinar adenocarcinomas, that is, they are not papillary, nor are they alveolar. Then, in addition to these adenocarcinomas, there is the alveolar carcinoma, the giant cell carcinoma, the small cell carcinoma, and the rare squamous cell carcinoma. In addition to the carcinomas, there are sarcomas which will not be discussed today except for the statement that the only sarcomas of any degree of frequency are the fibrosarcomas and lymphosarcomas. Now, I am going to ask Dr. Shofner shortly to talk about the surgical treatment in general, but first I should like to discuss the treatment of a single nodule in the thyroid gland. If a single nodule is present, I believe that it should be excised. There is no question about the fact that carcinoma of the thyroid occurs more frequently in a goiter than in a normal thyroid and it arises more frequently in a single nodule than it does in a thyroid with multiple nodules, or in a diffusely enlarged thyroid. Furthermore, carcinoma may be present already in the single nodule when the patient first seeks medical advice. It has been stated in the literature that the frequency of carcinoma in a single nodule ranges from five to twenty-four per cent. Dr. Shofner, would you discuss the surgical treatment in general, please?

DR. SHOFNER: In discussing the surgical treatment of carcinoma of the thyroid, I believe that one should begin with the premise that all non-toxic nodules, and especially solitary nodules, of the thyroid are to be regarded as malignant until proven benign by the pathologist. If this premise is accepted, then it logically follows that all nodular goiters should be removed in such manner that if the nodule should prove to be malignant, the surgeon would feel that all possible malignant tissue had been excised. In most cases of solitary nodule, this means lobectomy of the affected side, or if the nodule is located in the isthmus, this means excision of a large margin of tissue from both lateral lobes.

I think that it is well to emphasize the fact that so-called lateral aberrant thyroid tissue is in truth a metastatic carcinoma in a lymph node on the lateral aspect of the neck originating in a carcinoma of the thyroid on the corresponding side, and is usually the papillary adenocarcinoma. In such cases, the proper surgical treatment is a lobectomy and removal of involved lymph nodes. The original carcinoma in the thyroid may be very inconspicuous, in fact so small that it cannot be palpated even though the examiner is certain that it is present. Just the same, after the lobe is removed, a careful examination of the specimen will reveal its presence.

The papillary adenocarcinoma is the most common type of cancer of the thyroid, and in my opinion the type most likely to be cured. It is also the type most often found in children, in whom the cervical metastases are frequently the first evidence of disease. The papillary adenocarcinoma seems to metastasize most frequently through the lymphatics, and this rather slowly in most instances. The fact that the cervical lymph nodes are the first to be invaded and that they are readily accessible for removal puts a favorable aspect on this type of cancer, and invasion of the lymph nodes of the neck makes a radical neck dissection a reasonable procedure. On the other hand, most of the other cancers of the thyroid spread not only by the lymphatics, but especially by the blood stream, and it seems to me that radical neck surgery is not indicated. I know that much is written about the need for not only a radical neck dissection in the ordinary sense, but the removal of the ribbon muscles. I have never seen a case in which I thought this latter procedure was indicated. In the first place, it has been my experience that when the muscles were invaded, it was impossible to extirpate the diseased tissue. Always, there is dense attachment to the trachea, which really means invasion of the trachea, and removal of the trachea is certainly impracticable, although possible, since in laryngectomy, a portion is removed. But, when I have been able by prodigious effort to remove the bulk of the tumor, there were always shreds of tissue remaining which were residual portions of cancer. In the second place, if the carcinoma is of such nature that it can be removed in toto, it seems to me that one has accomplished all that can be done surgically. If the malignant cells have not yet entered the blood stream, then the patient is probably cured. If they have entered the blood stream, then radical surgery of the neck will not recall them. We have to depend upon other means of therapy such as X-ray or radioiodine to treat the metastases. I should like to refer, also, to the occasional presence of sublingual thyroid nodules. I have had two such cases, both of which were adenocarcinomas. Both patients had the tumor removed completely, were given X-ray therapy postoperatively, and both are living, one seven years and the other three years since operation.

DR. McSWAIN: As Dr. Shofner said, his plan of therapy for carcinoma of the thyroid is somewhat different from that advised by many surgeons in that he usually does not advise neck dissection, but his experience has been so vast that his plan of therapy should be thoroughly considered by anyone who attempts to treat carcinoma of the thyroid. It is my opinion that if the surgeon and surgical pathologist think that the tumor is completely removed, postoperative roentgen-ray therapy is unnecessary. Next, we shall consider the irradiation of carcinoma of the thyroid and first, I should like to ask Dr. Francis to talk about irradiation with the roentgen-ray.

DR. HERBERT C. FRANCIS: In general, the patients for whom X-ray therapy is used are those of the group in which vascular invasion or capsular invasion may be present, and thorough extirpation is not obtained. In this group, we have the papillary adenocarcinoma and that is, as Dr. Shofner said, the largest group and fortunately the group which is most responsive to X-ray therapy. The distinction between the thyroid and some of the other carcinomas in other parts of the body is that the most highly malignant group in the thyroid is the most resistant group to X-ray treatment. Alveolar carcinoma, giant cell and small cell carcinoma, some of the most malignant, would ordinarily be expected in other parts of the body to respond a little better. In the thyroid that is not true since they are quite resistant to the radiation treatment. It certainly is true that no radiation treatment of the primary lesion should be done without surgery where it is possible to do adequate surgery. That results, then, in X-ray therapy being used to try to eliminate the microscopic, or some very small microscopic parts, which have been missed in the surgical procedure.

In general, we can say that the X-ray therapy is perhaps a supplementary procedure rather than a treatment which is primarily used to eliminate disease without the use of surgery. The patient with a metastatic lesion of the thyroid, while usually not cured, certainly receives a tremendous amount of palliation, often of long duration, by X-ray treatment.

In treating the thyroid after operation, or in those cases in which complete removal has been impossible to achieve at operation, three fields are used. Of course, the fields must be individualized to the patient, but in general, three fields are used. One central, directly over the thyroid and trachea from the front, shooting directly through, and two lateral fields. It is not advised that large fields be used because the skin resistance in patients with thyroid lesions seems to be lessened so that very large doses cannot be given in a single series. For that reason, it is advisable in many instances to administer approximately 2,000 to 2,500 r to each field in a period of about 25 to 30 days, and then give a rest period of several months. If it is deemed necessary, another series of treatments is given. In many of these patients, it is a little difficult to evaluate the true value of X-ray alone. We do know that in some of those highly resistant carcinomas, large doses of X-ray treatment have been given without significantly affecting the course of the disease. On the other hand, in the middle sensitivity group which are relatively amenable to X-ray therapy, long periods of relief without recurrence have been achieved. I believe that some have been reported of as long as 25 years' duration following the surgical removal and X-ray therapy with no evidence of recurrence and perhaps death from some totally different cause.

DR. McSWAIN: In two-thirds of our patients who have survived past the five-year period, it was known that the removal of the tumor was incomplete, and in one of those patients nothing except a biopsy was done. In these patients X-ray therapy was given. In the one in whom only a biopsy was done, it has now been twelve years since the diagnosis of carcinoma of the thyroid was made and he is still alive and without evidence of recurrence. Dr. Towery, will you discuss the treatment of carcinoma of the thyroid with radioactive iodine?

DR. BEVERLY T. TOWERY: The possible use of radioactive iodine in the treatment of thyroid cancer has been under consideration since it was first shown that this isotope was selectively concentrated by thyroid tissue. During recent years the therapeutic usefulness of radioiodine has been investigated intensively. The results to date have generally served to dampen the enthusiastic reception which radioiodine therapy first enjoyed. An explanation of the limited therapeutic usefulness of radioiodine is shown by the simple fact that most thyroid cancers are so poorly differentiated that they do not accumulate the isotope. In a series following the same line of study that we have adopted here, 77 per cent of 119 thyroid cancers were of such a nature as to make it highly unlikely that these tumors would accumulate a therapeutically significant amount of radioiodine. This series was from the Massachusetts General Hospital and was reported by Dobyns and Maloof.[2]

In general, a therapeutically effective uptake of radioiodine will not be found unless the tumor exhibits histologic evidence of thyroid hormone formation, that is follicles which contain colloid, and this being evidenced by the fact that the cells have at least in part assumed the role of the parent organ in making thyroid hormone and therefore utilizing iodine in its manufacture. In this same series of cases, only 23 per cent of the tumors were classifiable as pure follicular carcinoma. This brings us to the differences in differentiation. When you have become interested in functional capacity of tumors, as you must in dealing with radioiodine, it is important to find out what evidence can be gained of the existence of colloid in the carcinoma. It is true that in this same series there were an additional 23 per cent which were mixed follicular and papillary tumors and were thought to contain enough follicular elements that radioiodine accumulation would be appreciable and perhaps could be influenced by certain manipulations.

Now, from this whole group, the remainder, or approximately 54 per cent, were chiefly the anaplastic types which were shown to accumulate no radioiodine. Now it is important to remember that even the well differentiated follicular carcinoma, which might look in certain spots like almost normal thyroid, exhibits much less affinity for radioiodine than does normal thyroid tissue. If thyroid cancer had the great affinity for radioiodine as does the thyroid in Graves' disease, radioiodine therapy would have a great deal to offer in such instances. Unfortunately, this is not the case. It may be possible, however, in selected cases of follicular carcinoma greatly to enhance the uptake of radioiodine by the use of thyroidectomy, alone, or in combination with subsequent administration of large doses of thiouracil. It is virtually impossible, however, by these means to initiate iodine accumulation in a tumor which never was well enough differentiated to begin the accumulation. In other words, if the tumor is reasonably well differentiated and has already begun to form follicles in which colloid-like material is found, you have a working chance. The more poorly differentiated the tumor is, the less chance there is of ever achieving any therapeutic uptake by this tissue.

Our present position regarding the use of radioiodine in carcinoma of the thyroid is about as follows: that, first and foremost the local cervical disease is primarily a surgical problem, with or without X-ray, and under no circumstances should radioiodine therapy ever be used to replace this important phase of management. Secondly, in the presence of distant metastasis, therapy with radioiodine should probably be attempted, no matter what the obstacles seem to be because you may occasionally find a tumor whose metastases are well differentiated and whose growth is slow, does not immediately threaten the patient's life, and gives time to work with the tumor in influencing its iodine uptake and achieving reasonably good results. The rapidly growing, invasive, poorly differentiated carcinoma which invades all the structures locally, spreads by lymphatics, with or without distant metastases, is almost never amenable to radioiodine therapy because it is so poorly differentiated.

Now, the use of radioiodine in a patient with distant metastases implies that we should be able to carry out studies of the radioiodine uptake of the tumor, either by measuring directly over the tumor, if it is isolated from the thyroid region, or preferably by using biopsies for the study of the radioiodine content of the tissue. It also implies that if minimal amounts of radioiodine appear to be taken up by the tumor, total thyroidectomy can be carried out in order to remove from the body this tissue which is so successful in competing with the metastasis for the radioiodine. It also implies that after thyroidectomy, repeated tracer studies can be carried out to establish the fact that the metastatic tumor has acquired an affinity or an increased affinity for I^{131}, and through thyroidectomy and the use of antithyroid agents to attempt to achieve the greatest possible uptake of radioiodine by the tissue before the therapeutic I^{131} is administered. Frequently, we see patients obviously shortly to go in extremis with a tumor which is poorly differentiated or at least only slightly differentiated and the time is simply not left to take out the thyroid, administer thiouracil and achieve any sort of therapeutically effective uptake by the metastasis. The use of radioiodine as a panacea in all cases of utterly hopeless cancer of the thyroid is a waste of isotopes, time and energy, because the time is usually not available to achieve anything like successful uptake and the patient expires before effective radioiodine therapy can occur. Our original hopes for radioiodine centered around a couple of very peculiar cases reported by some people in New York and in whom there were very rare examples of a hyperfunctioning thyroid cancer, and of course, in that case the metastatic tissue did take up a great deal of radioiodine.

If the patient has no distant metastases, it is better to treat him as if you never heard of radioiodine. If, however, at the time of the first operation, distant metastases are apparent from X-ray examination, one ought to consider the possibility of carrying out a total thyroidectomy then in order that the distant metastases be prevailed upon. If the metastasis begins to make hormone, then there is a possibility of treating this patient really effectively with radioiodine.

DR. McSWAIN: We have selected one patient for presentation; this will be done by Dr. Conerly.

DR. DAWSON B. CONERLY: Patient O.B. was 13 years old when first seen in Vanderbilt University Hospital on May 18, 1933, with a slowly enlarging mass in the right side of her neck of four years duration. Physical examination at that time revealed a 12 x 10 x 8 cm. very hard, nodular, non-tender mass in the region of the right lobe of the thyroid. The trachea was displaced to the left; there were no signs of toxicity and the

BMR was plus 4 per cent. On May 24, 1933, a hemothyroidectomy was performed with the removal of the ribbon muscles, as the tumor apparently invaded these structures. Microscopically, this was an adenocarcinoma. Postoperatively X-ray therapy was given. On August 3, 1933, the patient was readmitted and a 2 x $1\frac{1}{2}$ cm. right supraclavicular node was excised. This microscopically revealed metastatic adenocarcinoma. A second course of X-ray therapy was given at that time. At the present time the patient weighs 175 pounds, is married, has one child and no evidence of recurrence.

DR. McSWAIN: This patient, treated by operation and X-ray therapy, has lived nineteen years since the diagnosis of carcinoma of the thyroid was made.

Dr. Shofner, would you tell us your results in the treatment of carcinoma of the thyroid?

DR. SHOFNER: Of the 42 malignant tumors of the thyroid to which I referred a few moments ago, there were 25 cases who were operated upon five years or more previously and I classified them according to the age group. Of these, there were ten patients below the age of 50 at the time of operation and all those are living. Of 15 patients above 50 years, only three are living and apparently well. One is living with extensive metastases, ten are dead and one untraced. I also summarized cases which were operated upon less than five years ago; that, of course, has no particular value, but I do think it has some bearing on the relationship of age to survival. In 12 cases below 50 years of age, 11 are living and one is dead. Of the five cases above 50 years, two are living and three are dead. Of course, the normal life expectancy is greater below 50 than beyond 50 years, but it seems to me there are other factors. First, the majority of the younger patients had a more benign type of cancer. Second, and also important, the tumor had existed longer in the older patients, and in several cases, tumors which were relatively benign from a histological point of view had invaded the trachea and surrounding soft tissue so extensively that a satisfactory operation could not be done.

DR. McSWAIN: Are there any other comments? In conclusion, we might state that in our patients at Vanderbilt 40 per cent of them have survived beyond the five-year period, and I should like to state again that in two-thirds of those patients, the tumor was not completely eradicated by surgery, so therefore, one must attribute these survivals to roentgen-ray therapy. It is possible that in some few patients with well differentiated carcinomas of the thyroid who are beyond cure by operative or X-ray therapy, their lives may be prolonged by the use of radioactive iodine. Most important, I think, is the fact that a patient with carcinoma confined to a nodule of the thyroid may be cured by simple lobectomy.

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CLINICOPATHOLOGIC CONFERENCE

THE JOHN GASTON HOSPITAL*

History

This 50 year old colored male was admitted to John Gaston Hospital for the first time complaining of exertional dyspnea of two months' duration. For two weeks there had been signs of ascites. On the day before admission he had noted the presence of hemorrhoids. Two pericardiocenteses were said to have been performed by a private physician before admission; 200 cc. of fluid had been removed on one occasion. A culture of this fluid for tubercle bacilli had been reported negative.

Inquiry into his past history revealed "flu" at 15 years and "pneumonia" at 30 years. He had had gonorrhea at some time in the past. There was a history of consumption of more than a pint of alcohol daily over an extended period of time.

His family history was unrevealing.

Physical Findings: T. 98° F. P. 80/minute. BP. 118/90.

The patient was well developed and well nourished. There was distension of the neck veins. The sclerae were icteric; the fundi showed no abnormalities. The heart was enlarged to the anterior axillary line in the sixth intercostal space. The rhythm was regular and there were no murmurs. Fine moist rales were heard over the lung bases. There was evidence of much free fluid in the abdomen and the liver was palpated 3 cm. below the right costal margin in the mid-clavicular line. The rectal mucosa was prolapsed and there were hemorrhoids.

Laboratory Findings: Urine (voided) PH. 5.5; specific gravity 1.010; sugar 0; albumin 1+; 10-15 WBC and occasional hyalin and granular casts per high power field. Hematocrit 46 volumes %; buffy coat 1 volume per cent. Differential: 3 bands; 75 segmented forms; 21 lymphocytes; 1 monocyte. Serum bilirubin, one minute 1.9; total 3.8. Serum total protein 5.2 Gm. % with albumin of 3.6 and globulin of 1.6 Gm. %. Serum alkaline phosphatase 3.5 units. Plasma cholesterol 214 mg. %; inorganic phosphorus 3.7 mg. per cent. Prothrombin time: normal 15 seconds, patient 20 seconds. NPN 44 mg. per cent. CO_2 combining power 15 volumes per cent. Cephalin cholesterol flocculation 2+ in 24 hours. PPD second strength 2+ in 72 hours.

Electrocardiogram: Left ventricular pattern, digitalis effect, tendency to low voltage. *Fluoroscopy:* The heart showed slight generalized enlargement and weak pulsations. There was a slight pleural effusion about the left base. A bullet was seen near the midline in the posterior and lower aspect of the thorax.

Course and Therapy: He was put on a low salt diet and received penicillin, digitalis, and mercuhydrin. The ascites responded well to mercurials. He appeared to be doing remarkably well.

On the eleventh hospital day a WBC was reported 5,750, and a sedimentation rate 0.65 mm/minute fall (corrected). A pericardiocentesis and a liver biopsy for diagnostic purposes were planned. However, on the evening of the eleventh hospital day he complained suddenly of chest pain and expired almost immediately afterwards.

DR. RALPH I. GOLDMAN: The history and physical findings in this case indicate combined heart failure. We are told that the heart was enlarged and that no murmurs were audible; but it should be remembered that in cardiac failure murmurs previously heard are often lost. Left sided heart failure is borne out, of course, by the history of dyspnea and the finding of fine moist rales in the lungs. Distention of the neck veins, hepatomegaly, and large amounts of free fluid in the peritoneal cavity are compatible with right sided failure. The hemorrhoids which this patient noted just before admission are merely indicative of prolonged increase in intra-abdominal pressure. The development of hemorrhoids in pregnancy is analogous.

I believe that there are two points in the history which may be helpful. We are told that pericardial fluid removed before he was seen here showed no tubercle bacilli on culture. The history of prolonged alcohol intake in itself is not highly significant, since people who imbibe heavily do not necessarily develop portal cirrhosis of the liver so long as their dietary intake is adequate. Of course we are given no history of this man's dietary habits, but the laboratory findings are rather against a diagnosis of cirrhosis. This question will be covered in more detail later.

Turning to the electrocardiograms, I find that these are not very helpful. They do show that there is a tendency to low voltage and have been reported as showing a left ventricular pattern and digitalis effect. These tracings are not available at this time. This pattern is a point of controversy among cardiologists. Wilson, for example, feels that the pattern interpreted as left ventricular strain is entirely a matter of left ventricular hypertrophy; and that strain does not exist. Others believe that there actually is a strain pattern which can be differentiated from hypertrophy of the basis of a delayed intrinsicoid deflection which appears in hypertrophy but does not appear in strain. Aside from this, we do know that he had a low output type of failure and the history states that he was receiving digitalis. May we see the films?

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*From the Institute of Pathology and Division of Medicine, University of Tennessee, and John Gaston Hospital, Memphis, Tenn.

DR. JOHN BOWEN: This plain PA film of the chest shows questionable congestive changes in the lung fields and there is on the left side evidence of a small pleural effusion. There is slight cardiac enlargement, and from its contour this might be called a "water bottle" heart. The cardiac enlargement is generalized and it is not possible to detect any specific chamber enlargement. As you know, X-ray diagnosis of pericardial effusion may be very difficult and films may be of more help in ruling it in, than in ruling it out. In this film there is no positive evidence. At fluoroscopy, it was noted that there was diminished amplitude of cardiac pulsations. This second film, made at the time of fluoroscopy, contributes nothing further other than the presence of a bullet. It shows only in this film, and it is imbedded in the spinal muscles.

DR. GOLDMAN: I believe the bullet is a good red herring. The congestive changes referred to are shown here in the so-called butterfly pattern, that is, increased density spreading out fan-like from each hilus into the lung field. After seeing these films I would be inclined to think that there is some pericardial effusion. One sign that is most helpful in the X-ray diagnosis of pericardial effusion is a blunting of the cardiophrenic angle. Even though there may not be convincing radiographic evidence, however, we know that there was a pericardial effusion. The fact is stated in the history. Again, here is a case of combined cardiac failure and failure of the low output type.

Before going on to the heart and the question of why the pericardial effusion, it is necessary to rule out cirrhosis of the liver. Now in congestive cardiac failure, which this man had, there may be icterus on one or two bases. One of these is chronic passive congestion of the liver with actual parenchymal damage. The other possibility is pulmonary infarction, to which these patients are particularly susceptible, with subsequent breakdown of hemoglobin in the infarcted areas and increase in the circulating bilirubin. As mentioned previously, the laboratory data at hand is against cirrhosis. A cephalin cholesterol flocculation of two plus means nothing. The serum alkaline phosphatase of 3.5 units is within normal limits. The serum protein contributes no useful information. Only the delayed prothrombin time may have some significance. There is certainly nothing to strongly suggest portal cirrhosis and I believe we can eliminate it.

The next problem is, what caused the pericarditis? Uremia is to be considered, but this involves a fibrinous exudate rather than a fluid; and he showed no evidence of uremia. A malignant tumor with pericardial metastases could produce a pericardial effusion, in which event the fluid could be expected to be bloody. Boeck's sarcoid can produce a pericardial effusion, and so can some of the collagen diseases. I believe that a Chiari syndrome, that is, thrombosis of the hepatic veins can be mentioned as a possibility. These last considerations are not of common occurrence, but this case obviously presents an uncommon situation.

Finally, a silent myocardial infarct should be mentioned. The sudden death of this patient emphasizes this, and might be explained by the development of a ventricular tachycardia or rupture of the myocardium through an infarcted area. This is not out of the question.

The colored male patient is perhaps a little more likely to suffer an infarct without pain.

My diagnosis, however, is of myocarditis of unknown etiology. This is compatible with the findings. This patient may have expired in ventricular tachycardia.

Clinical Diagnosis: Myocarditis, etiology unknown.

Pathological Diagnosis: Primary amyloidosis of myocardium.

DR. HELEN PRIETO: This is a case of primary amyloidosis of the myocardium. It presents, however, certain features of the more common secondary type of disease. Primary amyloidosis most typically involves mesenchymal tissues, with special reference to cardiac muscle, tongue, the media of small blood vessels, and the gastrointestinal tract. There is variability in the staining reaction to Congo red and methyl violet; methyl violet often produces a more definitive reaction and this has been true in this case. Secondary amyloidosis is associated with chronic infectious diseases, among which tuberculosis, syphilis and osteomyelitis have been most frequently cited. In this second type there is a predeliction for parenchymal tissues, including liver, kidney, pancreas, and suprarenal gland. Staining with metachromatic dyes is more reliable. In the case considered today, there was no evidence of chronic infectious disease. The myocardial involvement, the clinical history, and the staining reaction are all typical of the primary form. Involvement of parenchymatous organs, however, follows the pattern usually associated with the secondary form.

On postmortem examination, this man showed an unusually robust muscular development, and there was no evidence of wasting disease. There were 200 cc. of fluid in each pleural cavity, 100cc. in the pericardial sac, and 2500cc. in the peritoneal cavity. In the pleural and pericardial cavities the fluid was thin, but slightly blood tinged. The peritoneal fluid was thin, straw colored, and entirely clear. The heart presented a most striking appearance. The weight after removal of all clot was 590 grams. The atrial endocardium presented a somewhat granular, glairy surface and a mural thrombus was identified filling the right auricular appendage and adherent to the endocardium. The valves showed no significant abnormalities; all presented ostia of adequate diameter and there was no evidence of insufficient closure. The aorta showed only slight sclerotic changes. The myocardium, however, was of an unusual consistency which can be described only as stiff. It showed a peculiar homogenous pale reddish brown, translucent surface upon section. Lugol's solution applied to the cardiac muscle in the fresh state gave the deep mahogany color characteristic of amyloid. In sections, there is marked derangement of the normal myocardial structure by masses of a faintly eosinophilic ground substance which replaces much of the interstitial tissue and encroaches upon the muscle fibers. This heart is better described by the term *cardiomegaly* than *cardiac hypertrophy,* since in amyloidosis the bulk of the weight is accounted for by the presence of the ground substance.

There was gross evidence of involvement of the spleen, which weighed 200 grams and on section presented a glassy, pale reddish orange surface. There was pronounced staining with iodine, borne out on microscopic examination by the appearance of amyloid in the splenic pulp. This presents a diffuse type of involvement, completely obliterating the normal structure. In a few areas remnants of follicles are represented by thin aggregates of lymphocytes.

There was involvement of both suprarenal glands, as evidenced by positive staining and microscopic examination. The unstained suprarenals showed no abnormalities.

Both lungs showed marked edema of the lower lobes, which is in keeping with congestive cardiac failure. A particularly careful examination for emboli in the pulmonary vessels showed none.

There was gross and microscopic evidence of severe chronic passive congestion of the liver with extensive central hemorrhagic necrosis. In several hepatic lobules in one section, there is deposition of material resembling amyloid in the location characteristic of secondary amyloidosis, namely between von Kupfer cells and hepatic cell cords. These foci, however, are by no means numerous.

Several tissues presenting no gross abnormalities show amyloid deposits on microscopic examination. These include lymph nodes from the mesentery and suprapancreatic region, where there is some deposition in the sinusoids. A section of pancreas shows the ground substance in the interstitial tissue and in some areas in the intralobular connective tissue.

The kidneys were rather large, the left weighing 310 grams and the right 340 grams. Except for the size, there were no gross abnormalities and sections have failed to demonstrate conclusively the presence of amyloid.

It is pertinent that exploration of the thoracic portion of the vertebral column was carried out and no abnormalities were noted. Sections of bone taken near the lead slug, which was buried in the spinal muscles, have shown no evidence of osteomyelitis.

In all sections, arteries and arterioles appear to be spared. Sections of the stomach, ileum, and colon show no involvement, neither do sections of skeletal muscle. The brain showed no abnormalities. In no sections could the granulomatous reaction often seen in primary amyloidosis be identified.

This patient died in cardiac decompensation and his death is well accounted for by the degree of myocardial involvement as well as the evidence of failure. There were no other anatomical findings to account for his rather dramatic termination. Although there was a mural thrombus in the right auricular appendage, no pulmonary embolus was found.

In *summary*, this is a case of primary amyloidosis with severe involvement of the myocardium and pericardial effusion; congestive cardiac failure was present manifested by pulmonary edema, pleural effusions, ascites and severe chronic passive congestion of the liver. In the involvement of spleen, suprarenal glands, liver, pancreas, and lymph nodes this disease behaves in the manner of secondary amyloidosis.

STUDENT: How do you explain the jaundice?

DR. PRIETO: As Dr. Goldman has pointed out, on the basis of severe chronic passive congestion of the liver. I do not believe there is significant hepatic damage by the small amounts of amyloid which are present.

DR. GOLDMAN: I should like to ask whether this patient showed a macroglossia, or whether any sections of tongue are available. Primary amyloidosis, as you know, frequently involves both cardiac and skeletal muscle, particularly the skeletal muscle of the tongue.

DR. PRIETO: No abnormalities were noted examination of the mouth. The tongue was not removed and sections are not available.

DR. CYRUS ERICKSON: I should like to point out that the presence of 100cc. of pericardial fluid might well show no X-ray changes.

STUDENT: How do you account for the albuminuria?

DR. GOLDMAN: A one plus albuminuria can certainly be accounted for on the basis of renal congestion in cardiac failure.

DR. PRIETO: This case agrees with manifestations previously noted in many cases of cardiovascular amyloidosis. These are the appearance of congestive cardiac failure for no evident good reason, usually in a patient around 50 years old, and accompanied by a low voltage electrocardiographic tracing.

The President's Page

WE SHOULD BE—AND WE ARE—PROUD OF THEM

Dr. Smith

Time was when members of the Auxiliaries to Medical Societies in Tennessee felt that they had no real part in the fight to constantly improve and extend medical care to our people. Time is—no more.

Whose fault was it that the doctors' wives felt that way? The answer may be found in the regulations and procedures followed by auxiliaries. It is customary—even mandatory in many cases—that the Medical Societies must request an Auxiliary for a specific service before it has the green light to do so. Did the Societies make many such requests five or ten years ago? The record shows that they did not. So the Auxiliaries' hands were tied. They were willing, able, even eager to help but the door to service was almost shut to them. Not so any more, I am glad to report.

Look at the splendid job done by the Auxiliaries in the recent get-out-the-vote drive. It is safe to say it could not have succeeded at all without them. They used their own ideas and applied their talents and energies with a determination that would not let go until the job was done.

Four years ago the TSMA approved a Statewide High School Essay Contest and voted the funds for an award. The State and Local Auxiliaries welcomed this project, took it over, and you have seen the results. The Auxiliary is now in the process of promoting the third Annual Essay Contests.

Local Auxiliary Essay Chairmen and helpers visit the schools, make talks, distribute the regulations, arrange for resource material, and then collect the county winning papers for State judging. If the winner is a girl, the State Auxiliary, and local Auxiliary in the convention city, are hosts to the young lady. They make the occasion a day for her memory book, an inspiration to try for more prizes in the game of life, both material and spiritual.

Doctors wives are more active than ever in other organizations in which they can render Public Service. Once each year, many of the Auxiliaries devote one program to Public Relations and invite in as special guests the representatives of all other women's organizations in the city, town or community.

We should be—and I think we all are—proud of our State and Local Auxiliaries and the excellent job they are doing.

Daugh W. Smith

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NOVEMBER, 1952

EDITORIAL

VIRAL HEPATITIS

Infectious hepatitis, also known as epidemic hepatitis or catarrhal jaundice, has long been recognized as a clinical entity. It has recurred in epidemic form, notably during wars among troops; it occurs in smaller epidemics in civilian practice. (Several communities in Tennessee have had outbreaks within the past year.) It is a disease propagated by the ingestion of food or water contaminated by fecal material containing the etiologic virus.

This editorial comment is to emphasize another type of viral hepatitis,—the homologous serum hepatitis. The physician plays a part in the transmission of this disease and therefore should be familiar with it. This disease is acquired only by the injection of infected material into a patient.

The viruses of the two forms of hepatitis probably are distinct, or at least represent different strains, because of the difference in the onset of symptoms, different incubation periods and an absence of cross immunity. These viruses are very resistant to sterilization procedures to which other infectious agents are susceptible. For example, of importance in the infectious or catarrhal type is the fact that the usual chlorine concentrations used in drinking water are ineffectual in killing the virus. If the doctor wishes to take precautions against disseminating the serum hepatitis in his office, he must set a limit of at least ten minutes for the boiling of needles, lancets and instruments. The irradiation of plasma by ultra-violet light is ineffective.

Clinically, the infectious type has an incubation period of several weeks and has an onset with gastrointestinal symptoms as well as those of a constitutional nature. Serum hepatitis has an incubation period of 80-120 days, has more insidious onset at first without fever, but at times severe systemic manifestations of malaise, headache, anorexia, arthralgias and at times urticaria and less common skin lesions. Later in both types there is fever, jaundice, tender hepatomegaly, in some splenomegaly and lymphadenopathy. The course may be mild and there are sub-clinical instances of proven disease, as shown by liver function studies. Death due to liver failure may occur; convalescence in others is prolonged.

Since viral hepatitis may lead to much morbidity, and even death, the physician should use every precaution to avoid transmitting the disease from person to person. Human blood, plasma and serum, no matter how prepared, have been the most common source of homologous serum hepatitis. Because it has been shown that persons having had hepatitis may be carriers of the virus for years, the American Red Cross in its blood-procurement program has eliminated those having had jaundice from their donor lists. Hepatitis has been traced to human thrombin used to control bleeding. In the physician's office, in hospitals and clinics the transmission of serum hepatitis has been in the main by needles and lancets. It has been shown that only 0.01 cc. of infected serum contains enough of the virus to infect the recipient. Therefore the use of multiple injection technic, even with change of needles, is dangerous. Epidemics of serum hepatitis have been traced to this technic. The syringe loaded with vaccine may be contaminated by aspiration of serum while pulling on the plunger to avoid venipuncture. Therefore the mere changing of needles does not insure against infection. Needles must be sterilized by no less than ten minutes of boiling.

Serum hepatitis has been shown to be transmitted by lancets or other instruments used in finger puncture for blood counts. Alcohol is inadequate for the sterilization of such equipment, especially since it coagulates the serum or blood with enclosed virus to be transmitted to the next patient who is stuck. The only way the laboratory technician, nurse or physician can play safe is to have an ample supply of Bard-Parker blades, let us say, to use one for one patient only, and then boil the whole lot for ten minutes.

Not only should our index of suspicion for this disease be raised, but we should be sure our injection, venipuncture and finger-stick technics are safe for our patients.

R. H. K.

*

IS THE TREND TOWARD SOCIALISM A SYMPTOM OF SENESCENCE?

The physician may view the body politic much as he does the human body since the diathesis of the aggregate may be much like that of its parts.

The human body in its life span from infancy to death in advanced years passes through a number of periods characterized, in general, by anticipated physical and mental attributes. Within limits we as physicians can predict the characteristics of the seasons of life. At birth there begins the period of gradual development and growth continuing through infancy and childhood. Then comes the time of harum-scarum youth, a time free of judgment, but not of fearlessness and carelessness,—in these days the time of reckless and abandoned automobile driving. With maturity, judgment begins to come into its own, but still there is a certain joy in taking a risk, the age which provides the good combat pilot,—the time of virility and the days filled with the joy of living. Then come the years in which, with increasing judgment and experience, most men become more conservative. Caution replaces or modifies the spirit to gamble or to take a chance either with life or limb, or in business or finance. But it is the most productive period, the drive and libido (in the non-sexual sense) are at their height. This period has been likened by the poets to the Summer of life. With its passage into the Fall years thoughts turn to security for the ensuing years,—thoughts incompatible with "taking a chance." The stocks are now hedged with bonds; the business is not expanded. In other words, the storm windows are put up, the storm doors put on and the house banked against the coming Winter.

Then comes the Winter, the years of old age and retirement. Now with the life's work behind him, the retired man has his security, he sits on the porch in the rocking chair or dozes in the sun on the sands of Florida.

Monarchic government in general provides through its line of succession a type of rule whereby the pater familias takes all the responsibility for his people. Democracy may be likened to the independent life of the citizen unit of the body politic.

The birth of democracy may be benign as in England as the result of economic factors. It may be a more traumatic lower forceps delivery as in our Revolutionary War, and be a still more lacerating high forceps delivery as in the French Revolution.

The early decades of our republic were the expected days of adjustment, coordination and integration among the divergent groups in the thirteen states—days of learning to walk alone, and yet to get along with our neighbors. Then came the adventuresome days,—the expansion westward,—the crossing of the Appalachians and the opening of the Northwest Territory. The exuberant decades of westward expansion ended when the wilds were conquered. These decades gradually gave way to a more mature consolidation of what had been gained in the expansion,—still having a young outlook, however, in the willingness to gamble for high stakes. These were the days of the railroad barons, the oil kings and the princes of steel. But the people of our democracy saw that the wild gambling for great fortunes in these *laissez faire* days were wasteful, possibly dangerous to the health of the body politic and thus, as with the individual citizens, our Democracy moved into the Summer of life, more conservative and cautious. Labor unions limited the exploitation of labor. Anti-trust laws forbade reckless disregard for other members of society (competitors), and capital in its investments and industrial expansion became more orderly and lost much of the air of gambling casinos.

The catastrophic illnesses of two World Wars and a depression have possibly hurried our Democracy upon the path of aging to the Fall of life. The prodromata of this season of the Democracy's life could be noted first after World War I. The symptoms and signs of aging have developed certainly, with progression in the succeeding decades, so that now this period of life is well established. Our society has asked for and is receiving more and more protection and security in all activities and walks of life. This is demanded as avidly as the man in his sixth decade attempts to assure himself of a steady income a dacade or more hence.

Thereby it seems that we as a people have reached the Fall season of our Democracy, analogous to the Fall in the life of the individual citizen.

Alex de Tocqueville,* a young French liberal, with the background of the French Revolution roamed the United States for one year, 1831-32. In the year 1835 he published a book entitled "Democracy in America," analyzing democracy in its many facets and predicting the course of such a form of government. He wrote:

> "I think, then, that the species of oppression by which democratic nations are menaced is unlike anything that ever before existed in the world. . . . Above this race of men stands an immense and tutelary power, which takes upon itself alone to secure their gratifications and to watch over their fate. . . . It provides for their security, foresees and supplies their necessities, facilitates their pleasures, manages their principle concerns, directs their industry, regulates their descent of property and subdivides their inheritances: what remains, but to spare them all the care of thinking and all the trouble of living? . . . It circumscribes the will within a narrow range and gradually robs man of all uses of himself. The principle of equality has prepared men for these things; it has predisposed men to endure them and often to look on them as benefits. . . . Every man allows himself to be put into leading-strings, because he sees that it is not a person or class of persons, but the people at large who hold the end of his chain. . . .
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> "By this system the people shake off their state of dependence just long enough to select their master and then relapse into it again. . . . Many persons are quite contented with this sort of compromise between administrative despotism and the sovereignty of the people; and think they have done enough for the protection of individual freedom when they have surrendered it to the power of the nation at large."

Does this prognosis made by a student of government over a century ago apply to the events of the past two or three decades? If such a man could predict the course of events as accurately as we can predict the changes of senescence, one might need to agree that the change to socialism is inevitable,—an aging process to which a democracy is subject. The rate of change might be modified by space and nutrition,—in terms of frontiers and national resources,—so well shown in Great Britain at the moment. Inevitably then we may need to look forward to the Winter years,—socialism, the state of degeneration when security is complete. Then Death must be faced. What the rebirth will reveal, future generations only will know for, as de Tocqueville says,—"the nation, weary of its representatives and of itself, would create freer institutions or soon return to stretch itself at the feet of a single master."

Some, even among our profession, say if this stage of degeneration is inevitable, why combat it,—saying in effect with Goethe, "learn to grow old gracefully." This is contrary to our whole philosophy as physicians. We of the medical profession are devoting more and more of our time and energy to combating and postponing the wear and tear of years, otherwise why the prostatectomies, the removal of cancers, the treatment of the complications of arteriosclerosis!

We as a profession through training and thought devote our lives to the prevention and cure of disease and the prolongation of life. We then must be the last to give up when senescence becomes apparent in the body politic. This means that we must lend our weight to whatever therapeutic and preventive measures come to hand.

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*de Tocqueville, Alexis: Democracy in America, (The Henry Reeve text revised by Phillips Bradley). New York, Alfred A. Knopf, 1948. Two volumes.

R. H. K.

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CHANGING METHODS IN MEDICAL EDUCATION

Elsewhere in the JOURNAL appears a description of the unique and interesting experiment being conducted in the educational program of the fourth year students at the University of Tennessee College of Medicine. This is the experience being given them in the General Practice Clinic. Since it takes some four or five years of experience with any curricular change before a balanced evaluation can be made, medical educators will await the verdict from this experiment with great interest.

Experimentation with the medical curriculum is nationwide at the present time, alterations being toyed with in many schools. The advances in the science of medicine and their application to practice were so rapid during the twenties and thirties that many educators pointed to the dangers of medical teaching becoming so involved in the science, that the art of medicine and the patient were being relegated to a secondary place. Thus, just before World War II, committees were established here and there to consider this problem and to explore possible curricular changes to combat the trend. With the War, accelerated schedules and depleted teaching staffs, proposed changes had to be postponed. Now, the last several years have seen the delayed application of proposals made some years ago. The next few years will carry much discussion concerning the relative merits of the current experiments.

The final measure of curricular changes must lie in the graduating student, his performance in the intern year, possibly in the assistant residency and ultimately as a doctor,—as a doctor not only in his first years in practice but as a doctor a decade or two decades hence. That medicine is not static is so well illustrated in the reminiscent paper appearing on the first page of this issue.

Whatever plan of teaching is used, certain objectives must be kept in mind. Teaching a medical student how to do things in 1952 is not the ultimate in education. This method may produce an automaton (dependent upon the intrinsic make-up of the student). The instructor must always keep before the student the 'why and wherefore' in diagnosis and treatment, in terms of pathology and disturbed physiology and biochemistry. Only in this way can the good doctor of the future be graduated. How else can the doctor rationally apply new methods unheard of at the time of graduation, or be critical of the pharmaceuticals left on his desk by the detail man in the decades of the future!

Therefore all of us interested in medical education and experimenting with new methods must not lose sight of our main objective, the production of a *thinking doctor*.

R. H. K.

DEATHS

Dr. Adolphus Farris Paschall died Saturday night, October 18, 1952, at his home in Puryear. Dr. Paschall had been in poor health for several months. Aged 85.

Dr. Joseph Conyers of Gates, Tennessee, died Wednesday, October 8, 1952, en route to a Memphis hospital after having received gunshot wounds suddenly.

Dr. Ernest M. Smith, Selmer, died in his home on Wednesday, October 8, 1952, after an illness of several months. Aged 63.

Dr. H. L. Armstrong, Somerville, died suddenly at his own clinic October 4, 1952. Dr. Armstrong had practiced medicine in Fayette County for 35 years. He was associated with his son, Dr. John L. Armstrong, in the Armstrong Clinic. Aged 64.

Dr. J. F. Gallagher, Nashville, died on October 21, 1952, of a cerebral hemorrhage at his home. Dr. Gallagher, native of Nashville, had practiced medicine in his home city for nearly half a century. Dr. Gallagher was a former Secretary-Editor of the Tennessee State Medical Association. His hobbies were music and flowers. Aged 68.

Dr. Louis Levy, Memphis, EENT specialist and community leader, died at his home in Parkview Hotel on Monday, October 20, 1952, of a heart attack. Dr. Levy was the founder of the Memphis Eye, Ear, Nose and

Throat Hospital. He was a former president of the Memphis Symphony Society and sponsor of the Memphis Symphony Orchestra. Aged 63.

Dr. L. C. Olin, Maryville, died Wednesday, October 22, 1952, suddenly in his sleep. Aged 54.

Dr. John Milton Curry died at his home in Donelson, September 21, 1952. Dr. Curry was a member of the staff of the Tennessee Hospital for the Feeble Minded. Prior to joining the staff for the hospital, Dr. Curry practiced medicine for 42 years in Hardiman and Madison Counties. Aged 70.

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Consolidated Medical Assembly

Eighty-three members of the Assembly with a large number of guests from the surrounding territory heard Dr. Alton Ochsner of New Orleans discuss "Venous Thrombosis" at a dinner session of the Assembly in Jackson on October 7. Dr. John Riddler of the Jackson Clinic opened the discussion which was participated in by a large number of those present.

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Chattanooga and Hamilton Medical Society

The Society met at 6:30 p.m. on the roof garden of the Newell Hospital for a buffet supper on September 25. Following the supper, Dr. Edward T. Newell, Jr. discussed hip fractures and Dr. Harold J. Starr spoke on poliomyelitis. Others on the program were Dr. Gilbert M. Roberts, Jr. and Dr. David P. McCallie.

*

The Society held its semi-monthly meeting at the Interstate Auditorium on October 9. Scheduled for this meeting was a consideration of new by-laws for the Society with particular reference to the election of officers. The scientific program for the evening consisted of a talk, a movie and subsequent discussions on the subject of "The Physiology of the Prostate." The speaker was Dr. O. B. Murray. Following the discussion on Dr. Murray's subject, Dr. Arch Bullard and Dr. Roy Young discussed "Vaginal Hysterectomy in Treatment of Uterine Prolapse." Plans for the annual dentist-doctors gold tournament were also completed at this time.

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Five County Medical Society

The Society is sponsoring a series of monthly lectures in co-operation with the Tennessee Academy of General Practice. At the September meeting of the Society, Dr. Kenneth C. Kohlstaedt, Chief of the Medical Department of Indianapolis, Indiana General Hospital, discussed the heart and the cardiovascular system. The meeting was held in the library of the Tennessee Polytechnic Institute.

*

Knoxville Academy of Medicine

The Academy cooperated with the East Tennessee Heart Association by giving over its regular meeting time in early October to cooperate with the Association in its meeting in Knoxville. The afternoon session of the joint program was conducted in the Knoxville Academy's building and the evening session was held in the Andrew Johnson Hotel.

*

The regular meeting of the Academy on October 21st was held in the Academy's Auditorium. Dr. Richter W. Wiggall read a paper on "Cutaneous Manifestations of Syphilis."

*

Memphis and Shelby County Society

The Society held its regular session on September 2 in the auditorium of the Institute of Pathology Building. A list of ten new members of the Society was presented. The scientific session consisted of a symposium on "The Use and Abuse of Modern Drugs." "Antibiotics" was discussed by Dr. John D. Young, "Cortisone and ACTH" by Dr. Bernard M. Zussman, "Endocrine Preparations and Vitamins" by Dr. Robert F. Ackerman, and "Sedatives and Narcotics" by Dr. D. C. McCool.

Nashville Academy of Medicine and Davidson County Medical Society

The meeting on October 14 was a dinner meeting held at Vanderbilt University Hospital. The papers presented were: "Present-Day Concepts and Uses of Vaginal Hysterectomys" by Dr. Carl S. McMurray and "Fevers of Unknown Origin" by Dr. J. Cyril Peterson.

A guest speaker, Dr. A. A. Weech, Professor of Pediatrics at the University of Cincinnati School of Medicine, addressed the Academy and its guests, registrants at the Nashville Medical Assembly, at a dinner meeting at the Hermitage Hotel on October 29. His title was "A Pediatrician Looks at the Behavior Problems of Children."

MEDICAL NEWS IN TENNESSEE

University of Tennessee College of Medicine

Training for General Practice: A Report by Dr. Paul Williamson

During the past twelve months there has been in operation at the General Practice Program designed to give medical students an introduction into the problems of general practice and to train family physicians, both at the undergraduate and the graduate level. This is a brief report of the first year of operation.

The General Practice Clinic, an undergraduate clinic designed for eleventh and twelfth quarter students, has now been in operation since September, 1951. The clinic is so designed that it resembles as nearly as possible a better-than-average rural general practitioner's office. Young men are allowed to do their own minor surgery, they are afforded a relatively complete laboratory, X-ray, BMR, EKG and numerous other diagnostic and therapeutic instruments. Patients are seen in this clinic without preselection so that the medical student gets a reasonable cross section of out-patient practice.

The student is not urged to watch members of the General Practice Staff do the work of medicine, but serves the function of the general practitioner himself. He is urged to do whatever procedure comes within the realm of his training, and he is helped to coordinate the medical knowledge he gained in the various specialty clinics in preceding years. He is told repeatedly that the patient is a person, not a carrier of disease and that his success in medical practice will be measured directly by his ability to consider patients as people.

The clinic is staffed entirely by general practitioners and is operated daily by medical students under the supervision of active family physicians. The standard of practice shown by these young men is good. In most instances, patients have been quite adequately cared for and there has been a definite gain in understanding by the medical student. Most of the students like the clinic though there has been dissent on the part of a few. Most have indicated that they feel that the training is valuable.

During the past few months, a home call service has been operated under the supervision of the general practice staff. Beginning early in his training the student selects a family toward whom he agrees to perform all the duties of family physician. For one calendar year he occupies a position of responsibility toward this family. It is his task to call at the home periodically, to make such medical calls as may be requested by any member of the family, to see the patients in the clinics, the emergency room, and to arrange for hospitalization if he thinks it necessary.

The most important concept in this program has been that of responsibility for the individual student. The work is not conducted in such fashion that he is allowed to watch the practice of medicine; rather, he subserves all the functions of the family doctor. A member of the general practice staff is available to him day and night to help wherever necessary, but such help is given purely on a request basis.

Perhaps the most pleasing point in the relationship between general practitioners and students has been the fact that the G. P. has shown a definite ability to come down to the student level and to attack with him a common problem. Many good friendships are growing up between medical students and general practitioners of our staff.

There has been developed a night service clinic which runs from four o'clock in the afternoon until midnight each day, operated by interns and residents under the supervision of the general practice staff. Intern training in this clinic has been a means of illustrating to these young physicians the field of competence of the general practitioner, his policy and plan of medical work. This is one of the busiest clinics in the institution.

A member of the general practice staff serves in the emergency and admitting rooms of the medical center from seven in the morning until midnight each night. During the intervening hours one member is on call. While he is requested not to interfere with the judgment of the interns and residents unless he feels it to the best interest of the patient to do so, the general physician has final decision as to the disposition of all emergency and admittance cases. We believe this to be the first instance in the country in which a major medical center depends upon an active general practice staff for all emergency and admitting room care. It has proven most satisfactory and, in many instances, has gained a rappaport between the trainee and the general practitioner which we believe will be valuable in the future.

A postgraduate program for general practitioners consisting of individual postgraduate courses has been organized by the general practice staff. These men are brought into the medical center for varying periods of time and serve essentially as residents on the various specialty services along with spending some teaching time in the general practice clinics. The courses are scheduled on an individual basis and are designed to embrace the material that the practitioner wishes to cover. A number of postgraduate trainees have gone through these courses and almost without exception have expressed the opinion that they serve the needs of the general practitioner better than many of the lecture courses which are currently available.

In addition to these teaching functions, the General Practice Office is rapidly becoming a nationwide clearing house for general practice thought. The office has been appointed national coordinator for all audiovisual education for the American Academy of General Practice and, at this time, has an extensive audiovisual program in the formative stage.

An information dissemination service has been organized on a nationwide basis, and various problems of general practice are constantly submitted to this office for comment. At the time of this writing, there has not been one unanswered inquiry nor one problem that has gone unchecked by this information dissemination service.

A research survey is now under way to determine ways and means of getting better help to the rural family physician. At present, we are exploring the possibility of training men as what we call "clinical associates." As our program now stands, these men will have an approximate two-year course covering medical economics, medical business administration, X-ray, laboratory, physiotherapy, and minor clinical procedures which may be done by personnel other than the physician. It is far too early to estimate the success of this program, but we believe that some such type of personnel may be developed to be of great aid to the practicing physician.

A research program in the evaluation of certain drugs has been under way by the general practice staff during the past several months. No extremely complicated research is contemplated by the members of this staff, but some of the clinical evaluations now in our files have been labeled as excellent observational work, done solely by general practitioners.

There are now under consideration three other developments by the general practice staff which will serve to emphasize the family physician. The general practice staff is certainly one of the most active groups in the University of Tennessee and has substantiated, to a great extent, the contention that the general practitioner can make a valuable contribution to the medical school and that he has a place in medical education.

This report is submitted not alone in pride for the work accomplished by this staff but in proof that general practitioners are willing and able to shoulder their full load in leading the way toward new and better medical education, and consequently toward a higher standard of medical practice.

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East Tennessee Heart Association

The Association had its second annual Heart Symposium in cooperation with the Knoxville Academy of Medicine. The meeting was held at the Andrew Johnson Hotel on October 7, 1952. Guest speakers were Dr. Stanley Gibson of Chicago and Dr. Robert P. Glover of Philadelphia.

★

The Central Association of Obstetricians and Gynecologists

The Association held its annual meeting in Memphis October 30-November 1 with headquarters at the Peabody Hotel. The Memphis Obstetrical and Gynecological Society hosted more than four hundred physicians from thirty-seven states who attended. Dr. W. T. Black, Jr., was chairman of local arrangements.

★

Neuropsychiatric Association

The 28th annual convention of the Central Neuropsychiatric Association was held in Nashville on October 17-18 with headquarters in the Andrew Jackson Hotel. The program was sponsored by the psychiatrists, neurologists and neurosurgeons of the host city. Three Nashville members of the Association are Dr. Frank H. Luton, Dr. William F. Orr, Jr., and Dr. Eric Bell.

★

Postgraduate Medical Study

The schedule of the postgraduate course in Internal Medicine and Circulatory Diseases for Circuit VII has been completed. The first lectures will be held the week of December 1 to 5, inclusive, at the following centers.

Center	*Date*	*Time*	*Lecture Hall*
Clarksville	Monday, December 1	7:30 P.M.	Sumner County Health Center
Gallatin	Tuesday, December 2	7:30 P.M.	Sumner County Health Center
Nashville	Wednesday, December 3	8:00 P.M.	Academy Hall, Doctors Building
Springfield	Thursday, December 4	7:00 P.M.	Springfield Hospital
Dickson	Friday, December 5	8:00 P.M.	Dickson County Health Department

The Postgraduate Committee office has already received a number of registrations for the next circuit. Mr. Cummings, the Field Director, will work in these areas during November completing the registration.

Dr. John F. Dee, the instructor, is giving a very practical course and one which is being enjoyed by all enrolling for the course.

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Knoxville Surgical Society

The Society was addressed last month by Dr. Harwell Wilson of Memphis on the subject "Surgical Implications of Sickle Cell Anemia." The meeting was held at the Andrew Johnson Hotel and was attended by a large number of surgeons in Knoxville and the surrounding areas. Dr. Robert Newman is president of this society.

★

Central State Hospital

Dr. Oscar S. Hauk, Superintendent of Central State Hospital, announced the celebration of the One Hundredth Anniversary of Central State Hospital. The following program will be given on Monday, December 1:

Morning Session

Welcoming Address by Dr. John B. Youmans, Nashville.

Historical Background of Central State Hospital by Dr. Frank H. Luton, Nashville.

Factors Influencing the Discharge of Patients from State Hospitals, Dr. William F. Orr, Jr., Nashville.

Progress in Hospital Treatment, by Dr. Oskar Diethelm, Cornell University, New York.

Luncheon speaker will be The Honorable Gordon Browning, Governor of Tennessee.

Afternoon Session

Present Status of Treatment in State Hospitals by Dr. Daniel Blain, Medical Director, American Psychiatric Association.

The Enduring and the Ephemeral in Psychiatry During the Past Century by Dr. Gregory Zilboorg, Chairman, Committee on History of Psychiatry, American Psychiatric Association.

*

Tennessee Chapter, College of Surgeons

The Tennessee Chapter of the American College of Surgeons, which was organized in Knoxville during the annual meeting of the Association last April, held its first Scientific Session in Nashville on October 28, 1952.

The program which was presented in the amphitheater of the Vanderbilt University Hospital was opened with a panel discussion on "Surgery of the Heart." The moderator for this discussion was David Strayhorn, M.D., and the collaborators were H. William Scott, M.D., Elliott Newman, M.D., Mildred Stahlman, M.D., and Rollin A. Daniel, M.D.

Following this panel discussion was a symposium on "Trauma." The various studies on this subject explored by William Meacham, M.D., who discussed "Care of Acute Head Injuries"; Walter Diveley, M.D., whose subject was "Acute Chest Injuries"; Sam Prevo, M.D., who explained "Injuries to the Extremities with Emphasis on Early Treatment of Fractures"; and James A. Kirtley, Jr., M.D., who concluded the symposium with "Management of Traumatic Arterial Emergencies."

The program for the afternoon session was presented by Dr. Cecil Newell, M.D., of Chattanooga, Tennessee, who discussed "The Use of Wire Mesh in Surgery." His discussion was followed by James L. Southworth, M.D., of Knoxville, Tennessee, whose subject was "Artificial Circulation for Intracardiac Surgery." Following these speakers, the business session was held at which time the presentation of the charter was made by Prather Saunders, M.D., who came from the home office of the American College of Surgeons in Chicago.

A recess was then held and the afternoon discussions were presented as follows: John Burch, M.D., of Nashville, Tennessee, who discussed "Problems Related to Hysterectomy"; Harwell Wilson, M.D., of Memphis, Tennessee, who discussed "Stricture Common Bile Duct: Prevention and Treatment"; and finally Oliver DeLozier, M.D., of Knoxville, Tennessee, who concluded the afternoon session with "Aureomycin in Preoperative Preparation of Vagina."

A dinner meeting at the Hermitage Hotel was opened by remarks from President R. L. Sanders, M.D., of Memphis, Tennessee. The guest speaker for the evening was Ropert B. Turnbull, Jr., M.D., from Cleveland, Ohio, who chose for his subject "Surgical Treatment of Ulcerative Colitis."

The Executive Council met in a business session on the evening of October 27. Members of this council are: President, R. L. Sanders, M.D., of Memphis; Vice-President, E. T. Newell, M.D., of Chattanooga; Secretary-Treasurer, H. Dewey Peters, M.D., of Knoxville. The Councilors are L. W. Edwards, M.D., of Nashville; Hiram A. Laws, M.D., of Chattanooga; David H. Waterman, M.D., of Knoxville. The Governors are as follows: John C. Burch, M.D., of Nashville, and C. D. Blassingame, M.D., of Memphis.

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University of Tennessee College of Medicine

Dr. Hilde Fielder of Munich, Germany, has joined the Department of Biochemistry as a research associate.

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A research grant of $1,500 has been made to Dr. James G. Hughes of the Department of Pediatrics by United Cerebral Palsy. The purpose is to investigate by the EEG for evidences of birth injury which might later be revealed as palsy.

*

The Memphis Heart Association has awarded a grant of $1,500 to Dr. Robert Brown, of the Department of Pharmacology, to study the ability of the female sex hormones to produce hypertension.

*

Newell Hospital

This modernized hospital held open house for citizens of Chattanooga on October 8. The building is air-conditioned and equipped with fifty beds.

PERSONAL NEWS

Dr. Dion A. Greer of Pikeville was honored on Sunday, October 19, 1952, when more than a thousand Bledsoe Countians paid tribute to the 83 year old doctor on "Dr. D. A. Greer Day."

Dr. Clarence Shaw and **Dr. Foster Hampton,** both of Chattanooga, were scheduled to participate in a new series of radio broadcasts over station WAGC. The series is sponsored by the Chattanooga-Hamilton County Health Council in cooperation with the Chattanooga-Hamilton County Medical Society.

Dr. Clyde R. Kirk, Chattanooga, has opened newly remodeled offices in the Professional Building.

Dr. Louis A. Killeffer and **Dr. Stratton Jones,** both of Harriman, will move into their new thirteen room office building in December.

Dr. J. Pervis Milnor, Jr., Memphis, addressed a recent meeting of the Memphis Civitan Club on the subject of heart disease.

Dr. F. G. Little of Morristown has purchased the interest of Dr. M. J. Bellaire in the Bellaire Hospital and is now the sole owner.

Three Nashville physicians have arranged to hold office hours at Mount Juliet. They are **Dr. Walter L. Dively**, **Dr. James W. Ellis**, and **Dr. C. W. Woodcock.**

Dr. A. S. Witherington, Jr., of the Munford Clinic plans to remodel the clinic and also erect an addition to the clinic building.

Dr. S. D. Sullenberger, president of the Hamblen County Society, approved the society report of the Red Cross Blood Program in a recent issue of the *Morristown Sun.*

Dr. Claude C. Snoddy has opened his office for the practice of medicine at 111 South Atlantic Street, Tullahoma.

Dr. Jack Adams, Chattanooga, gave a radio address recently over station WAPO. His subject was "Know Your Hospital."

Dr. Milton Adams, Memphis, has been named president-elect of the American Society of Plastic and Reconstruction Surgery. He was elected at the end of the group's four-day meeting at the Waldorf Astoria Hotel in New York. He assumes office in October of 1953.

Dr. William F. Meacham, Nashville, has been elected president of the Neurosurgical Society of America. The election occurred at a meeting of the group held recently at Sea Island, Georgia.

Among the Tennessee physicians elected to fellowship in the American College of Surgeons at its recent annual meeting in New York City were: **Dr. Rudolph Matas Landry**, **Dr. Edward G. Johnson** and **Dr. George Shelton** of Chattanooga; **Dr. Henry T. Kirby-Smith** of Sewanee, **Dr. Thomas P. McKee** and **Dr. John M. Wilson** of Johnson City.

Dr. Sam Lambeth, Maryville, has been appointed to the Professional Advisory Committee of the Tennessee Vocational Rehabilitation Service.

Dr. Murlin Nester has opened offices in Lawrenceburg for the practice of medicine and surgery. Dr. Nester is formerly from West Virginia.

Two faculty members of the University of Tennessee College of Medicine in Memphis received Distinguished Service Awards at a ceremony held by the University of Chicago on October 3. **Dr. Harwell Wilson,** professor and chief of the Division of Surgery, and **Dr. Frank Whitacre,** professor and chief of the Division of Obstetrics and Gynecology, were given the Distinguished Service certificates. These awards were given to certain former residents and graduates who made "outstanding contributions in teaching, investigation, and the practice of medicine." The University of Chicago was celebrating the Twenty-Fifth Anniversary of its enlarged University Clinics.

Drs. Jack Chesney and **Felix G. Line** announce the moving of their office from 710 West Hill Avenue, Knoxville, Tennessee, to Room 128, Shelbourne Towers Apartments, Knoxville, Tennessee.

BOOK REVIEW

Dynamic Psychiatry: Basic Principles, Volume One. Dynamic Psychiatry: Transvestism—Desire for Crippled Women, Volume Two. Louis S. London, M.D. Washington, D. C., 1952, Corinthian Publications, Inc. Price $2.00 and $2.50.

These two volumes are very concise and well written. Volume one presents an excellent historical account of the progress made in psychotherapy from its beginning to modern day psychiatry as well as a very good presentation of the psychology of the Libido with contributions made by various leaders in psychiatry.

Volume two is devoted to one phase of psychopathology, — transvestion. It is a presentation and discussion of an unusual case of sexual deviation in which the patient had an abnormal interest in crippled women and masqueraded as a male or female cripple. It is concluded by an analysis of this case.

These volumes are most entertaining and enlightening. They represent a vast amount of research and study. The subject is presented in a very concise manner without the usual elaborate and over use of psychiatric terminology. The size of the text is misleading since the subject is very well covered in few pages with an adequate bibliography. They would be of value to anyone with more than just an occasional interest in psychiatry.

A. Lawrence White, M.D.
Central State Hospital

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Symposium on Hypertension

Hypertension or its complications touch every branch of medicine. A goodly number of the readers of this symposium themselves suffer from the disease. These papers should prove of interest.

ETIOLOGIC FACTORS IN HYPERTENSION*

E. WHITE PATTON, M.D., Chattanooga, Tenn.

Hypertension reflects a disease which today is extremely common. It is estimated that 15 million people in the United States are hypertensive,—approximately one in every ten individuals. And this number undoubtedly will increase with the increasing longevity of our population.

In spite of its numerical importance and in spite of entensive clinical and experimental work, the pathogenesis of most instances of hypertension remains obscure. A specific etiology can be established in only approximately 5 per cent of the patients suffering from hypertensive disease. Even in these, though the cause is known, the mechanism of the production of hypertension is poorly understood. The 95 per cent remaining constitute that group historically familiar as essential hypertension.

In spite of the relative rarity of instances of hypertension of known cause, their importance is great. This group furnishes those cases of hypertension most amenable to cure. Thus when a unilateral renal anomaly or pyelonephritis is responsible for hypertension, nephrectomy may be curative. Likewise the surgical removal of adrenocortical tumors and pheochromocytomas has resulted in cure of hypertension. The surgical correction of coartation of the aorta has yielded similar results.

Etiology

Etiologic factors in the production of hypertension can best be classified as renal, neurogenic, endocrine, and mechanical.

Renal. Since the classic experiment of Goldblatt[1] in producing hypertension by partially constricting the renal arteries, much interest has centered about the kidneys as the primary cause of hypertension. Experimentally renin and related pressor substances have been demonstrated in renal hypertension. More recently interest has turned to various pressor—depressor systems which involve not only renal participation but hepatic and adrenal as well. While much similarity exists between experimental renal hypertension and essential hypertension, it fails to satisfy as a complete etiologic basis for clinical hypertension.

Certain hypertensions of known cause definitely are of renal origin. These include hypertension resulting from pyelonephritis, acute and chronic glomerulonephritis, and the rare vascular abnormalities resulting in obstruction to renal blood flow.

Neurogenic. Interruption of the flow of neurogenic impulses to vasoconstrictor end organs results in significant blood pressure reduction in certain instances. This has been demonstrated by general anesthesia, sympathectomy, heavy sedation, and various blocking agents such as dibenamine and tetraethylammonium chloride. These findings suggest that some hypertensives suffer from their disease because of augmented vasoconstrictor nerve activity. This in turn may be the result of cortico—hypothalmic imbalance or nervous tension mediated through the medullary vasomotor center. At present this approach fails to explain all hypertension but undoubtedly many patients show a strong neurogenic component.

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Endocrine. Endocrine factors have long been incriminated in the causation of hypertension. Experimentally it may be produced by injections of anterior pituitary extract and by the administration of desoxycorticosterone. Clinically the resistance of the hypertensive person to insulin, and the relationship of salt metabolism to blood pressure levels suggest endocrine participation. Yet here again the evidence supports anterior pituitary—adrenal dysfunction in some hypertensives but it is not a complete answer to hypertension in general.

Abnormalities of the endocrine system give three of the most striking examples of hypertension of known cause, namely pituitary basophilism, adrenocortical tumors and pheochromocytomas. Pheochromocytomas as a cause of hypertension are unique in that they represent one of the few examples of a known cause and known mechanism of the production of hypertension. The latter being the excess production of epinephrine or norepinephrine by the tumor.

Mechanical. Mechanical factors in the production of hypertension are expressed almost exclusively by coarctation of the aorta. Here again we have an instance of hypertension of known cause and a reasonably well defined mechanism. Apparently the aortic constriction and mechanical impediment to blood flow is paramount in production of the hypertension.

Heredity. An etiologic factor in hypertension which has received relatively scant attention is heredity. For generations medical observers have noted the predilection to cardiovascular disease in certain families. However, any serious study of heredity and hypertension was not possible until the advent of the sphygmomanometer in 1896.

Weitz in 1923[2] was the first to make a serious inquiry into hypertension and heredity. In a study of 82 patients having essential hypertension, 77 per cent had lost at least one parent from cardiovascular disease. In a control group of 267 normotensives only 30 per cent had lost a parent from this disorder. He also measured the blood pressure of siblings of hypertensive patients and found the incidence of elevation significantly higher than among siblings of normotensive patients.

Ayman[3] in 1934 studied the blood pressures of 1,524 members of 277 families. He found that in families whose parents had normal blood pressures, the incidence of hypertension in the children was only 3 per cent. In families in which one parent had hypertension, the incidence in the children rose to 28 per cent. In families in which both parents had hypertension the incidence of hypertension in the children reached the impressive level of 46 per cent.

Hines[4] studied cold pressor test reactions in a large number of normotensive and hypertensive individuals. Analysis of the family history revealed that a positive family history of cardiovascular disease was found to be five times as frequent among hypertensive persons, or in those who were hyperreactors to the cold pressor test as it was among the normal reactors.

Platt[5] reported upon 116 cases of hypertension who were carefully classified as to their type. In 76 per cent of his hypertensive patients there was a reliable family history of hypertension. In the control group of normotensives and in a small group of hypertensives secondary to a known cause, the figures were 39 per cent and 35 per cent respectively. These findings closely resembled those of Weitz.

These and other investigators are of the opinion that essential hypertension is a hereditary disease and that hypertension is conveyed as a medelian dominant. Absolute proof of this opinion is not possible from the limited nature of the studies available.

Analysis of these studies of hereditary influences on hypertension indicate a relationship of extreme practical value.

If the hypertensive patient has a positive family history of hypertension, the chances are almost 6 to 1 that the patient's hypertension is essential in type. On the other hand, if the history gives strong evidence against hypertension in the parents, the chances are more than 3 to 1 in favor of a hypertension secondary to a demonstrable cause.[6] This difference is indeed impressive!

Summary

Various experimental and clinical studies on the pathogenesis of hypertension have been briefly outlined. While all represent some advance in our knowledge of the disease, the hereditary factor offers the most practical help in the clinical approach to hypertension.

The striking influence of family history on the classification of hypertension, whether essential or secondary to demonstrable cause, is of great aid in diagnosis and subsequent treatment of such a patient. The simple expedient of obtaining an adequate history may yield more valuable information relative to the classification of a hypertensive patient than elaborate and expensive diagnostic studies.

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HYPERTENSION IN INFANCY AND CHILDHOOD*

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The relative infrequency with which arterial hypertension occurs in infancy and childhood unfortunately has led to widespread indifference concerning the determination of the blood pressure of infants and children in health and disease. Obstacles to be overcome are: (1) variations in published figures for normal pressures, implying uncertainty concerning the normal range; (2) difficulty in keeping infants and children quiet; (3) difficulty in auscultation of the pulse beat; (4) need to use cuffs of proper width for children of different ages; (5) time consumed in the procedure. As a result, all too often the physician follows the line of least resistance and simply does not determine the blood pressure.

However, experience amply indicates that failure to ascertain blood pressure in children often leads to diagnostic error, sometimes of serious proportions. It is the purpose of this paper to discuss the normal blood pressure in infancy and childhood, and to point out some of the conditions associated with hypertension, in the hope that there will be more general interest in this aspect of pediatric practice.

Determination of Blood Pressure in Children

In this determination two factors deserve special attention: (1) width of the cuff and (2) an estimation of nervous tension. It is well-known that the use of a narrow cuff results in a falsely high pressure and an inordinately wide cuff results in a falsely low pressure. The studies of Robinow and associates[1] indicate there is close correlation between intra-arterial pressure and that obtained by the sphygmomanometer when a cuff of 2.5 cm. (1 inch) width is used for infants less than one year of age, and a cuff of 9 cm. (approximately 3½ inches) width for those from one year to 13 years of age. Such cuffs are on the market. Failure to have cuffs of proper size available accounts for many of the erroneous determinations of blood pressure in children. If a cuff of ordinary width (for adults) only is available, one can get the best results by folding the cuff so that it covers the middle two-thirds of the upper arm of the child.

A practical method for determining the systolic blood pressure of infants has been introduced recently.[2] It is based on the principle of compression of an extremity to drive out the blood and determination of the pressure at which the blood rushes back into the extremity when the external pressure is lowered. The extremity, usually the leg, is elevated and wrapped tightly

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(puttee-fashion) with an elastic bandage or a piece of rubber; the blood pressure cuff is inflated to a level sufficient to prevent entrance of blood. The wrapping is then removed and the pressure in the sphygmomanometer is lowered slowly. The point at which a pink flush rapidly colors the extremity correlates closely with the systolic pressure. Obviously the diastolic pressure cannot be determined by this method.

Perhaps the most difficult aspect of determining blood pressure in children is the necessity to take into account, and to diminish, if possible, nervous tension which elevates pressure. Studies by Clayton and Hughes[3] in hospitalized children revealed that pressure differences of as much as 30mm. Hg. occurred because of apprehension at separation from parents, newness of hospital surroundings, and other factors which make entry into a hospital a terrifying experience for some children. A kindly, patient approach helps to allay fear. Before the cuff is placed on the arm of the frightened child it is advisable to show him the equipment, to tell him that it is only a little rubber balloon in a cloth bag, to show it to him, to inflate it for him. It is well to gently squeeze his arm and say that he will feel only such a sensation, and to have him watch the mercury column go up and then down, as if the whole procedure were a game. Such an approach is far more rewarding and actually more time-saving than a simple direct approach of determining the pressure without consideration of psychic factors. Even then, one may have to determine the pressure at intervals of 15-30 minutes to find what the true pressure is when apprenhension has been allayed.

The greatest rises in pressure due to emotional stress are noted within the first hours of hospitalization, but other events, such as visits of parents, painful procedures, awakening from sleep, and increased physical activity, as in a recreational therapy room, may all be associated with transient rises of pressure, rarely to hypertensive levels. The point to make is that the child must be studied as well as his pressure if one is to differentiate between mild hypertension due to emotional tension and that due to disease.

Normal Blood Pressure in Children

Numerous studies have been made to evaluate the normal range of blood pressure in infancy and childhood,[1,4-8] but one is struck with the discrepancies of the reports of various observers. From a practical standpoint differences in reported normal values are of little clinical importance. Except possibly in the earliest stages of diseases causing hypertension, the blood pressure clearly exceeds the values given in the following table, and one is rarely at a loss as to whether hypertension is present or not. A widely used rule, perhaps not completely accurate for application in infants, is to define hypertension in pediatric practice as the presence of a systolic pressure greater than 120 mm. Hg. when a cuff of proper width is employed and the child is at ease. Repeated determinations of pressure are required in order to eliminate the factor of apprehension.

In the newborn infant, employing a blood pressure cuff of 2.5 cm. (1 inch) width, Clement Smith[9] states that the average systolic and diastolic pressures are 80/46 at birth, 85/40 at one day, and 100/50 at ten days.

According to Lyon[10] the average blood pressure of children is as follows:

Age, Years	*Systolic*	*Diastolic*
4	85	60
5	87	60
6	90	60
7	92	62
8	95	62
9	98	64
10	100	65
11	105	65
12	108	67
13	110	67
14	112	70
15	115	72
16	118	75

Classification of Causes of Hypertension

Children have hypertension from most of the same causes which produce an elevated blood pressure in adults. The following classification of causes of hypertension by Page and Corcoran[11] is only one of many current classifications, indicating that there is no unanimity of opinion. However, it offers a useful clinical approach. In the following pages certain of the causes will be discussed, but no attempt will be made to consider all possibilities. When faced with a puzzling case of hypertension in a child the physician would do well to consult this classification, or a similar one.

It is not always possible to ascertain the cause of transient rises in blood pressure in children. The pressure may fluctuate from one observation to another, sometimes being a little higher than so-called normal values. If this occurs, careful consideration should be given to the possibility of the presence of a disease producing elevation of pressure but, most of all, the child should be brought back for serial determinations of pressure and every effort should be made to detect factors producing apprehension or chronic emotional tension. Some observers report a prepuberty rise in blood pressure without clinical symptoms and not of severe degree.

Classification of Hypertension

(Page and Corcoran)

Renal

a. Affections of vessels

Arteriosclerosis
Arteritis
Panarteritis nodosa
Visceral lupus erythematosus
Scleroderma
Vascular anomalies and obstructions (embolism, venous or arterial thrombosis, aneurysm, tumor)

b. Affections of parenchyma

Acute nephritis
Chronic nephritis
Pyelonephritis
Hydronephrosis
Polycystic disease
Amyloidosis
Infarcts
Tumors
Hypernephroma
Ectopia
Toxemia of pregnancy
X-Ray lesions
Renal stones
Hypogenesis
Dystopia

c. Affections of perinephric structures

Perinephritis
Tumors
Hematoma
Retroperitoneal masses causing pressure on parenchyma; Wilms' tumor

d. Affections of ureter

Obstruction (pelvis, ureter, prostate, urethra)
Pyelitis

Cerebral

Increased intracranial pressure (trauma, tumor, inflammation)
Diencephalic stimulation
Anxiety states
Lesions of brain stem (ascending paralysis, poliomyelitis)
Acute porphyria

Cardiovascular

Heart failure
Arteriovenous fistula
Heart block
Coarctation of aorta
Atheromatosis
Polycythemia

Endocrine

Pheochromocytoma
Adrenal carcinoma
Adrenal-hyperplasia (?)
Chorionepithelioma
Adrenal-like ovarian tumor
Cushing's syndrome
Pituitary basophilism (?)
Acromegaly
Thymic carcinoma
Hyperthyroidism
Arrhenoblastoma

Unknown

Essential hypertension
Malignant hypertension

Renal Causes of Hypertension

Acute Nephritis. The great majority of children with acute nephritis have arterial hypertension. The abrupt elevation of pressure in nephritis is attributed to generalized arteriolar constriction, which increases peripheral circulatory resistance. The heart pumps more strongly to force the blood through narrowed arterioles so that the nutritional needs of tissue may be met. Although not proven it is now believed that the renin mechanism is responsible for the hypertension of acute nephritis.

Arterial hypertension of acute nephritis is dangerous for two chief reasons: (1) It may, possibly in conjunction with toxic myocardial changes, precipitate cardiac failure, the most common cause of death in acute nephritis. (2) Severe arteriolar spasm of cerebral vessels associated with such hypertension may, through ischemia, produce anoxia of the cortex, leading to cerebal manifestations of the disease commonly known as hypertensive encephalopathy. These effects consist of restlessness, dimness of vision, diplopia, sudden blindness, headache, drowsiness, vomiting, and severe generalized convulsions, sometimes resulting in death.

The vast majority of children with acute nephritis have a systolic pressure above 120 mm. Hg. and a diastolic pressure above 90 mm. Hg., clear criteria of hypertension in this age group. Employing a 9 cm. cuff and allaying nervous tension are prerequisites for the accurate determination of pressure.

It is important to realize that mounting hypertension precedes the cerebral manifestations of acute nephritis by several hours, and that high blood pressure in the nephritic child is a danger signal indicative of impending difficulties. Therefore, the child with significant hypertension should be hospitalized and his blood pressure determined at 4 hour intervals. Reduction of hypertension is the key to success in the management of this disease.

The traditional approach to the control of hypertension in the acute nephritic consists of: (1) rest in bed, easily achieved in the acute stage; (2) sedation with a barbiturate preparation; (3) use of drugs to relax constricted arterioles, notably magnesium sulfate. Recently, newer drugs have been employed experimentally but it is too early to evaluate them fully.

The average child with acute nephritis who has a blood pressure of less than 140 systolic and 100 mm. Hg. diastolic can often be managed successfully by strict bed rest and moderate sedation. If the pressure is higher magnesium sulfate should be employed. The standard dose of a 50 per cent solution injected intramuscularly is 0.2 cc. per Kg. (2.2 lbs.) body weight. This dose is repeated at 4 hour intervals as required, based on whether reduction in hypertension has been maintained or whether the pressure is as high or higher than before.

If the child is urinating in normal amounts this dose may be insufficient and 0.3 cc. per Kg. may be injected for a few trial doses and the effect be observed. If marked oliguria is present the dose may be reduced to 0.1 cc. per Kg., to avoid potentially dangerous retention of magnesium with central nervous system depression. Experience and repeated evaluation of the patient are required in the use of magnesium sulfate when there is severe oliguria or anuria.

Magnesium sulfate may be given orally or intravenously. To patients with only moderate hypertension and no evidence of cardiac failure 1 to 2 ounces of 50 per cent magnesium sulfate may be given orally 3 to 4 times a day. Strangely enough, this quantity does not usually produce catharsis. If the nephritic patient has convlusions from hypertensive encephalopathy, if the pressure is rising despite intramuscular injections and a cerebral storm seems impending, or if the patient is in cardiac failure (largely due to hypertension), magnesium sulfate may be given intravenously as a 1 per cent solution at the rate of 2 to 3 cc. per minute. The total amount given should not exceed 200 cc. Blood pressure determinations are taken frequently as the drip infusion proceeds at the rate indicated above, and when the pressure has reached a level slightly above normal the infusion is discontinued. If respiratory depression occurs during the infusion (rarely noted if the technique described above is employed), a dilute solution of calcium chloride should be injected slowly intravenously in order to counteract the depressant action of magnesium and other measures should be instituted to stimulate respiration. If the patient has been digitalized, calcium should never be injected intravenously lest prompt and permanent cardiac arrest ensue.

Hypertension of acute nephritis usually responds excellently to the measures mentioned. However, an occasional nephritic child will have sustained hypertension for a week to 10 days, little influenced by therapy and apparently not harming the patient. Therefore, if the pressure is followed carefully, if the patient seems to be doing well and has no cerebral manifestations, and if magnesium sulfate is being given to prevent large upsurges of hypertension there is little reason for undue concern over the fact that the pressure does not return promptly to near normal levels.

Chronic Nephritis. Hypertension is one of the chief findings in chronic nephritis. Although the blood pressure may fluctuate somewhat in the early stages of the disease it relentlessly rises as the disease progresses. Diagnosis ordinarily is not difficult, given a suitable period of observation, often several months. If the disease has begun insidiously and an intercurrent streptococcal infection causes an acute exacerbation of the chronic process, it may prove difficult initially to differentiate early chronic nephritis from acute nephritis. The usual favorable course of acute nephritis with recovery within a period of weeks is in contrast to the continued hypertension of chronic nephritis and persistence of evidences of renal impairment.

In the differential diagnosis of hypertension in children chronic nephritis should always be considered. Such children are often pale, anemic and below par in physical vigor and weight. Headache and fatigability are common complaints. Puffiness about the eyes and in the extremities may be noted, and at times edema is massive when the "nephrotic syndrome" is present.

Polycystic Disease. Although patients may have polycystic kidneys without hypertension, elevated blood pressure is present in some. It has been attributed by some to renal ischemia due to compression of intrarenal vessels by enlargement of the cysts. Presence of hypertension or evidence of chronic renal insufficiency attract attention to the kidneys, and the diagnosis is fixed with almost absolute accuracy by retrograde urography which reveals a characteristic "spider" pelvis with flattened minor calyces and elongated major calyces.

Unilateral Kidney Disease. The work of Goldblatt,[12] Page and Corcoran[13] Braun-Menendez and his associates[14] and the contributions of many other investigators, have revealed the role that unilateral renal ischemia may play in the genesis of hypertension. Various procedures causing unilateral renal ischemia elicit hypertension in the experimental animal. Best-known are constriction of the renal artery by a silver clamp (Goldblatt), and wrapping the kidney in an envelope of silk or cellophane (Page) which produces a contracting hull compressing the kidney.

The subject is too complex for discussion as a part of a symposium such as this especially since many points are controversial. Certain facts deserve emphasis, however. Renal ischemia causes the production and release into the circulation of a substance, termed *renin*, which acts with a substrate called *hypertensinogen*, to produce a vasoconstrictive product known as *hypertensin*. Hypertensin stimulates smooth muscle contraction of arterioles thereby increasing peripheral resistance and causing hypertension. If only one kidney is rendered ischemic elevation of blood pressure is only temporary, whereas if ischemia is also produced in the other kidney, or it is excised, long-lasting hypertension is achieved. Hypertensin may be inactivated by a hostile enzyme, *hypertensinase*, believed to be produced chiefly in the liver and kidneys.

Experimental evidence that unilateral renal ischemia produced hypertension led to immediate attempts to apply this knowledge to human hypertension. Since more than 90 per cent of adults with hypertension have the so-called "essential" form, efforts have been made to attribute this disease to renal ischemia. Much controversy exists and the matter is far from settled. It would require considerable space to sketch even briefly the conflicting viewpoints and, furthermore, essential hypertension is a rare event in children.

Of greater interest in pediatric practice is the fact that many instances of high blood pressure due to unilateral renal ischemia have been detected, and in some of these patients complete cure of hypertension has followed removal of the diseased kidney. Therefore, in every case of otherwise unexplained hypertension in a child evidence should be sought for unilateral kidney disease as the cause. This is all the more mandatory because it is believed there is a time interval, possibly two years or less, in which nephrectomy may result in relief of hypertension, and after which vascular changes in the opposite kidney and elsewhere may make nephrectomy fruitless for reduction of hypertension.

However, it should be pointed out that unilateral kidney disease often exists without hypertension, that it is actually the cause of elevated blood pressure in only an occasional patient, and that it is impossible to predict that removal of the diseased kidney will certainly result in relief of hypertension.

Preoperative evaluation of the function of each kidney should be performed requiring, among other studies, catheterization of the ureters and clearance studies, including especially determination of effective blood flow in each kidney. This obviously requires hospitalization in a properly equipped and staffed center.

If the contralateral kidney is normal, removal of the diseased kidney may result in cure of the hypertension. If it is known that the contralateral kidney is diseased, or its excretory function is found to be impaired, excision of the more diseased kidney should not be done for relief of hypertension but may be indicated because of the pathologic process itself (hydronephrosis, etc.). When both kidneys are known to be diseased the worse one should never be removed simply to seek cure of hypertension.

Unfortunately, studies of renal function, including clearance studies, do not always disprove intrarenal vascular changes which may account for ischemia and consequent hypertension. Although sensitive methods, such as modern clearance technics, help detect renal functional impairment far more accurately than previously employed cruder methods (concentration tests, PSP excretion, etc.) unilateral renal ischemia of some degree may exist without detectable impairment of kidney function. Nevertheless, clearcut demonstration of reduced blood flow in one kidney in a patient with otherwise unexplained hypertension would warrant careful consideration of nephrectomy.

The work of Trueta and his associates,[15] showing that intrarenal shunting of blood may render the cortex ischemic without reducing renal blood flow, imposes yet another obstacle in evaluation of renal function. Shunting of renal blood through larger juxta-medullary glomeruli may occur from many types of stimuli. Thus, renal ischemia, setting in motion the renin mechanism, may conceivably be possible on a functional basis as well as on fixed organic occlusive changes in vessels.

Among the long list of lesions which have been found to produce unilateral renal ischemia, presumably thereby accounting for hypertension, may be listed: unilateral pyelonephritis leading to diffuse scarring and intrarenal vascular changes; unilateral hydronephrosis; renal tumors (in children, embryomas—Wilms' tumors); cortical abscesses of large size; hematomas and large blood cysts, the result of trauma; hypoplasia of the kidney, with associated hypoplasia of the renal artery; intermittent occlusion of the renal artery in ptosis of the kidney, in which, in the recumbent position, blood pressure is normal but hypertension develops when the patient stands and torsion of the renal pedicle is produced by ptosis of the kidney; embolic occlusion of the renal artery; and, in older individuals, occlusion of the renal artery by dissecting aneurysm, atheromatous plaque, or arteriosclerosis.

Experience has shown that of this long list of possibilities, pyelonephritis, with resultant scarring of the kidney, is the most common unilateral renal condition producing hypertension susceptible to cure by nephrectomy. The vast majority of children with pyelonephritis make uneventful recoveries, and in those in whom infection persists hypertension is not an invariable sequel. However, the fact that hypertension can result from smoldering kidney infection is one of the great reasons why treatment of pyelonephritis should be vigorous and prolonged sufficiently to eradicate the infection. The urine should invariably be checked for at least a month after apparent cure in order to assure that recovery has actually ensued. Persistence of infection, or recurrence, immediately suggests an obstructive uropathy and makes urography mandatory, since failure to detect obstruction and remove it will foster continued infection, not only hazardous from the standpoint of destruction of one or both kidneys, but a known cause of subsequent hypertension.

It is of clinical interest that temporary hypertension is not infrequently noted in acute pyelonephritis. Several instances have been observed in patients who had rather severe infections, with many pus and blood cells in the urine, positive urine cultures for bacteria, and who responded rapidly to appropriate antibacterial therapy. Hypertension receded as infection subsided. Theoretically, the elevated blood pressure could result from intense swelling of the infected kidneys within the tight confines of their capsules, rendering the cortex ischemic despite presence of infection. It is apparent how this syndrome of hematuria and pyuria associated with hypertension requires differentiation from acute nephritis, which also produces an excess of red cells and leukocytes in the urine and elevated blood pressure. Absence of edema in pyelonephritis is an excellent bedside differential point, as well as age of the patient, since acute nephritis is exceptionally rare in children under three years of age, the time when pyelonephritis is most common.

Cardiovascular Causes of Hypertension

Coarctation of the Aorta. Whenever it is found that a child has hypertension, coarctation of the aorta, easy of diagnosis, should be considered in the differential diagnosis. This anomaly exists in two main forms: (1) the "adult" type, in which there is a localized constriction of the aorta as if a ligature had been placed around the vessel, usually located just above the point of entrance of the ductus arteriosus; (2) the "infantile" type, in which there is diffuse narrowing of the aorta between the left subclavian artery and the point of entrance of the ductus. The "infantile" type is often associated with generally severe, cardiac malformations. Such patients ordinarily die in infancy. The following remarks will be restricted to children with localized coarctation.

Experimental studies indicate that the cause of hypertension in coarctation of the aorta is bilateral renal ischemia. Deliberate constriction of the aorta below the origin of the renal arteries fails to produce hypertension, whereas constriction above their origin produces it. Furthermore, renal clearance studies show diminished blood flow to the kidneys before operation and improved flow afterwards.

Chief findings upon which a diagnosis of coarctation of the aorta is based are the following, not all of which are invariably found in every patient: (1) hypertension in the arms; (2) hypotension in the legs; (3) extensive collateral circulation over the front of the chest, the upper back and the axillae, evident by palpable arterial pulsations and audible bruits in these locations; (4) notching of inferior borders of ribs on the roentgenogram, due to erosion of pulsating enlarged intercostal arteries taking part in the collateral circulation; (5) special studies with injection of radio-opaque media, such as visualization of the norrowed segment by retrograde carotid injection of diodrast. Scalloping of the lower margins of ribs may not be noted in early childhood, and usually not before patients are twelve years of age; resiliency of tissue of the young is thought to account for this.

If the collateral circulation is sufficiently extensive, there may be only minimal hypertension in the arms, but there is invariably a clear-cut hypotension in the legs.

The ease with which the condition can be detected by routine palpation of the femoral artery, the fact that unrelieved hypertension due to coarctation may subsequently result in cerebral hemorrhage, rupture of the aorta, or cardiac failure, and the brilliant results of surgery in eliminating coarctation should serve as a stimulus to physicians to be continually alert for this lesion.

Patent Ductus Arteriosus

Patent ductus arteriosus is often associated with systolic hypertension, but the diastolic pressure tends to be low. Furthermore, on exercise the diastolic pressure drops to lower levels, instead of rising as it does in normal individuals. Diagnosis is based on combinations of the following: (1) presence of a continuous "machinery" murmur in the second left intercostal space, with systolic accentuation (the diastolic component may not be heard until the child is four or five years of age); (2) blood pressure changes as noted above; (3) in many cases, characteristic configuration of the heart on fluoroscopy, revealing fullness or bulging of the pulmonary conus and increased prominence of vascular shadows in the medial lungs fields, sometimes producing a "hilar dance"; (4) when the diagnosis cannot be fully established by critera given above, utilization of special studies such as phonocardiography, cardiac catheterization, or angiocardiography.

Following successful ligation or section of the ductus the diastolic pressure rises to normal. There may be transient hypertension for a week or so following operation.

Aortic Insufficiency

Aortic insufficiency, if of marked degree, may result in elevation of the systolic pressure without concomitant increase of diastolic pressure. In children, aortic insufficiency is usually the result of rheumatic carditis, but it may be present in deformities of the aortic cusps, as in the Eisenmenger complex.

Endocrine Causes of Hypertension

Although decidedly infrequent in occurrence, a variety of endocrine abnormalities may produce arterial hypertension: (1) hyperthyroidism; (2) disorders of the adrenal gland, including (a) pheochromocytoma, (b) Cushing's syndrome, (c) adrenal cortical tumor; (d) congenital adrenal hyperplasia, (e) overdosage of desoxycorticosterone in the treatment of adrenal contical insufficiency; (3) use of ACTH and cortisone; (4) ovarian agenesis.

1. *Hyperthyroidism.* This commonly produces hypertension. Kennedy,[16] reporting upon the large number of children with hyperthyroidism in the Mayo Clinic series, states that "elevation of the systolic blood pressure, and consequent increase in pulse pressure, is an almost constant finding." In 138 hyperthyroid children in whom blood pressure determinations were made only 9 per cent had a systolic pressure below 110 mm. Hg., whereas 68 per cent had a systolic pressure ranging between 120 to 160 mm. Hg. Systolic pressures as high as 190 mm. Hg. were encountered. On the other hand, the diastolic blood pressure was affected little or not at all. The diastolic pressure ranged from 50 to 90 mm. Hg. in 90 per cent of cases. As would be expected, when these children were under basal conditions there was a slight diminution in arterial hypertension.

2. *Disorders of the Adrenal Gland.*

A. *Pheochromocytoma.* This is a tumor of chromaffin tissue which liberates large quantities of the vasopressor substances epinephrine or nor-epinephrine (arterenol), thereby causing hypertension which may be either sustained or paroxysmal.[18-21] Only 8 verified cases have been reported in children, although approximately 180 cases have been recorded in adults. In 58 patients operated upon, 45 cures and 13 deaths have been reported. This entity represents one of the types of hypertension amenable to surgery.

When the chromaffin tumor arises from the adrenal medulla, as it usually does, it is termed a pheochromocytoma; when it originated from the parasympathetic ganglia outside the adrenal gland it is called a paraganglioma. The physiologic effects are the same regardless of site of origin! In 10 per cent of cases both adrenal glands are affected. In the minority of cases in which the tumor is not within the adrenal gland it may be located retroperitoneally anywhere from the organ of Zuckerkandl at the bifurcation of the aorta to a point as high as the thoracic sympathetic ganglia. In approximately 90 per cent of cases the tumors are benign, in about 10 per cent malignant. In only one-third of cases can they be palpated.

Some tumors secrete enormous amounts of epinephrine, which, in addition to hypertension, produces increased metabolic rate, hyperglycemia and glycosuria. Others secrete predominately nor-epinephrine, which causes hypertension but without such striking effects on metabolic rate, blood glucose or excretion of glucose.

Two clinical syndromes may occur: (1) Bouts of paroxysmal hypertension of extreme degree, associated with pounding of the heart, throbbing headache, pallor, hyperhidrosis, weakness, apprehension, paresthesias, dilation of the pupils, blurring of vision, sense of fullness in the epigastrium and other less common symptoms. The sudden attacks last from a few minutes to several hours. Pulmonary edema, dyspnea and cardiac failure may supervene. (2) Sustained hypertension without paroxysms. If the elevation of blood pressure is continued over a long period of time, secondary arteriolar sclerotic changes may perpetuate hypertension.

Although admittedly a rare lesion, diagnosis should certainly be suspected in individuals with paroxysmal hypertension, and should be considered in the differential diagnosis of all patients having unexplained elevation of blood pressure.

The following factors assist in diagnosis: (1) history of attacks; (2) observation, including determination of blood pressure, during an attack; (3) in those instances in which epinephrine is the predominant vasopressor substance secreted in abnormal amounts, detection of elevated metabolic rate, hyperglycemia and glycosuria; (3) palpation of both renal areas; (4) chest roentgenograms to detect the occasional case in which the tumor is visible as a shadow projecting laterally from the densities cast by the vertebral bodies; (5) excretory urogram to reveal downward displacement of the kidney by large pheochromocytomas of the adrenal gland; (6) perirenal aerogram, which is not without danger; (7) massage of both renal areas in an effort to produce a rise in blood pressure from liberation of increased amounts of the vasopressor substance; (8) finally, and much the most accurate approach, demonstration of a precipitous fall in blood pressure by slow intravenous injection of adrenergic blocking agents, notably the hydrochloride salt of piperoxan (Benodaine [R]), formerly known as benzodioxan. Intravenous injection of histamine to produce sudden accentuation of hypertension, according to the method of Roth and Kvale, is now considered too dangerous by some observers.

Surgical extirpation of pheochromocytomas is attended by certain well-known dangers, including paroxysmal hypertension when the gland is handled at operation, severe hypotension when the gland is removed and, in some instances, postoperative adrenal cortical insufficiency. These dangers can be minimized by careful preoperative preparation, use of adrenolytic agents during operation, ligation of the vascular supply prior to removal of the tumor, injections of epinephrine in large amounts if hypotension occurs and use of cortisone in some cases.

B. *Cushing's Syndrome.* Cushing's syndrome is a relatively rare cause of hypertension in children. According to Wilkins[22] 26 cases of this syndrome have been reported in children under 10 years of age, all due to adrenal tumor. He states that after 10 years of age the syndrome may be due to adrenal tumor, adrenal hyperplasia or basophil adenoma of the pituitary.

Various combinations of the following findings serve to suggest the diagnosis: "moon" face; "buffalo" type obesity, with fat especially prominent about the shoulders and upper trunk, with relative slenderness of the lower trunk and extremities; ruddy, plethoric complexion; striae; acne; hirsutism; hypertension in most cases; in older children; pain in the back due to osteoporosis with atrophy and crushing of vertebrae; renal calculi in some cases; early appearance of sexual hair; at times, glycosuria and a diabetic type glucose tolerance test; and increased excretion of 11-oxysteroids and 17-ketosteroids in the urine.

Since the syndrome in children is usually due to adrenal tumor, operative removal of the tumor offers best hope of cure, but adrenal insufficiency may develop postoperatively. Further details of therapy are given by Wilkins.[22]

C. *Adrenal Cortical Tumor.* Hypertension may be due to a virilizing tumor of the adrenal glands. Males develop secondary sexual characteristics at an unusually early age: increase in size of penis, but not in size of testes; development of sexual hair; frequent erections; acne; deep voice; rapid growth in height and weight with marked muscular development ("infant Hercules"); advanced bone age and early fusion of epiphyses so that eventual stature is less than normal. Girls with such tumors have similar masculinizing findings. Characteristic of the syndrome in both sexes is the abnormally high urinary excretion of 17-ketosteroids.

D. *Congenital Adrenal Hyperplasia.* Hypertension is noted in the adrenogenital syndrome due to congenital adrenal hyperplasia, an entity which may have a familial distribution. Although reported cases differ in some respects, combinations of the following findings serve as a basis of diagnosis: early enlargement of the penis without concomitant testicular enlargement or, if a female, early enlargement of the clitoris; tendency in some cases to crises of acute adrenal cortical insufficiency, with Addisonian-like picture; rapid development of secondary characteristics along lines described above under adrenal cortical tumor. In the newborn period, the chief problem, not present in every case, is the great tendency to weight loss, dehydration in spite of high fluid intake, acidosis, severe vomiting and in some instances diarrhea. Dehydration is the result of inability to retain sodium and chloride, which pass into the urine with large quantities of water; despite frequent clyses dehydration rapidly returns, as if one tried to fill a bucket with a hole in it. The diagnosis is substantiated by the clinical picture and chemical findings, including diminution of serum sodium and chloride, elevation of potassium and blood NPN, decreased carbon dioxide combining power, usually in the range of 25 to 30 volumes per cent, and excessive urinary excretion of 17-ketosteroids. Adequate therapy with salt-containing fluids, incorporation of salt in the formula, and use of desoxycorticosterone (DOCA) or cortisone may suffice to combat the episodes of adrenal insufficiency. These may recur, or the child may be spared them, only to grow unusually rapidly and to develop secondary sexual characteristics at an extremely rapid rate. Acne, hirsutism, deep voice, advanced bone age and eventual early closure of epiphyses are some of the findings.

In the differential diagnosis of hypertension this syndrome should be kept in mind. The clinical picture usually suffices to suggest the diagnosis, but chemical evaluation fixes it with more certainty.

E. *Overdosage of Desoxycorticosterone.* Overdosage of desoxycorticosterone (DOCA) may produce hypertension, presumably by great increase of blood volume due to retention of sodium and water. It is one of the hazards in use of this agent.

3. *ACTH and Cortisone.* ACTH and cortisone do not usually produce hypertension, but when therapy has been continued for 10 to 14 days it is not unusual "to observe a slight rise (20-40 mm. Hg. systolic, 10-30 mm. Hg. diastolic")[23] Such therapy results in retention of sodium and chloride, hence water, and blood volume is thereby increased, leading to hypertension. This possible adverse effect should be kept in mind, especially when these agents are used in individuals with damaged hearts, particularly those with rheumatic carditis.

4. *Ovarian Agenesis.* Hypertension may be present in the syndrome of ovarian agenesis.[22] In some of the patients elevated blood pressure seems due to concomitant coarctation of the aorta, a frequently associated anomaly, especially if the patient with ovarian agenesis also has a webbed neck. The patients are stunted, have a boyish configuration of the trunk, and have persistence in infantile nipples, breasts, labia, vagina and uterus. Laparotomy reveals only a whitish ridge of tissue where the ovary should be, containing stroma cells but no epithelial or germ cells. The patients develop sexual hair but have no female sexual characteristics. A characteristic diagnostic feature is the great increase of follicle-stimulating hormone (FSH) in the urine, which may not be noted until the child is about 10 years of age.

Intracranial Causes of Hypertension

Increased Intracranial Pressure. Increased intracranial pressure from a variety of causes may produce hypertension. However, Ford[21] states that "contrary to the popular impression, increased intracranial pressure due to brain tumor does not, as a rule, cause persistent elevation of the blood pressure." Any child whose hypertension cannot be easily explained on another basis should be investigated carefully from the standpoint of whether an intracranial process is responsible. Tumors, abscesses, hemorrhages, lead poisoning, and sudden development of hydrocephalus from any cause are among the possible etiologic factors. Adequate investigation requires a general medical history and examination; meticulous neurologic examination, including examination of the optic fundi; complete studies of the spinal fluid, including pressure; skull roentgenograms; and, in special instances, more detailed evaluation, including electroencephalography and pneumoencephalography. The consulting neurosurgeon can be relied upon to guide this phase of the investigation.

Malignant Hypertension

Malignant hypertension with arteriolar sclerosis is very rare in children, but has been observed even in infants. According to Ford,[21] it is more common in children more than 6 years of age, has no predilection for sex and is not familiar in incidence. Renal insufficiency may not be present in the early stages, but when it occurs later typical changes similar to those in adults are observed: arteriolar sclerosis, degeneration and necrosis of vessels and tissues supplied, albuminuric retinitis and progressive rapid impairment of renal function with early exitus. The blood pressure may rise to exceptionally high levels and focal or generalized convulsions often occur, as well as "transient or persistent hemiplegia, hemiparesis, aphasia and hemianopsia."[24] Early symptoms of malignant hypertension in children consist of severe and frequent headaches, often accompanied by vertigo and vomiting. There is no treatment of any avail.

Periarteritis Nodosa and Lupus Erythematosus

Periarteritis nodosa and disseminated lupus erythematosus, both rare in the pediatric age group, may produce hypertension.

Poliomyelitis

It is well known that poliomyelitis may produce temporary hypertension. This is especially true of the bulbar form. Considering a diastolic elevation of 10 mm. Hg. above standard values as hypertension, Grulee and Panos[25] noted hypertension in 72 per cent of 70 patients with bulbar poliomyelitis, 7 per cent of 243 patients with spinal paralytic poliomyelitis, and 12 per cent of 114 cases with nonparalytic poliomyelitis. Although some have thought such hypertension was produced by hypoxia, particularly in the bulbar form, these authors were of the opinion that damage to the bulbar cardiovascular centers was the probable causative mechanism. The basis for this belief was the persistence of hypertension in the face of adequate oxygenation.

Drugs

Certain drugs may produce hypertension, but their role as the cause of hypertension in children offers little diagnostic difficulty. Among the many drugs which produce elevation of blood pressure may be mentioned BAL (dimercaptopropanol), amphetamines (Benzedrine and Dexedrine), epinephrine, ephedrine, and neo-synephrine.

Summary and Conclusions

1. There is need for greater interest in determining blood pressure in infants and children.

2. Special requirements for accurate determination involve chiefly the width of cuff and degree of apprehension.

3. Palpation of the femoral artery should become a part of routine physical examination.

4. A table of normal values for pressures at various ages has been presented.

5. A classification of causes of hypertension has been given.

6. From this classification, certain entities of pediatric interest have been selected for discussion. Chief causes of hypertension fall into categories of renal, cardiovascular, endocrine and intracranial factors.

7. Far from being relatively simple, the causes of hypertension in the child are varied and, at times, complex.

8. Advances in diagnostic techniques, supportive pediatric care, particularly endocrine therapy, and increased surgical skill offer hope of cure of hypertension in selected cases.

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MEDICAL TREATMENT OF HYPERTENSION*

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In dealing with a subject of such magnitude as the Medical Treatment of Hypertension one could easily spend all of the fifteen minutes allocated on any one of the newer drugs or in a short discussion of all of them. To do so would only add to the present state of confusion and uncertainty and gain nothing in so far as the practical treatment of hypertension is concerned.

Therefore, I shall attempt to deal with this subject in as practical a manner as possible, discussing those things that we advise in everyday practice, mentioning a number of controversial subjects and giving our interpretation of the literature and personal experiences.

After arriving at a diagnosis of any disease I have found it practical and wise to outline for the patient a schedule of treatment as follows: (1) General Measures. (2) Diet. (3) Rest. (4) Exercise. (5) Habits. (6) Medication. We shall approach the subject of hypertension from these six aspects.

General Measures

It is my belief that in dealing with hypertension the advice we give the patient under this heading is by far the most important, and all other advice is of secondary importance. One might actually change the heading, General Measures, to Psychotherapy.

There are a number of important facts concerning hypertension which the physician should recognize so that he may impart them to his patient in a judicious manner. In the first place the physician must recognize that despite all of the brilliant work of Harvey, Bright, Goldblatt, Page, Harrison, and others, the real cause of hypertension remains obscure at this time. Of equal importance is the fact that since there is no known etiology of essential hypertension, there is no cure except in the occasional case of pheochromocytoma, coarctation of the aorta, or a true "Goldblatt kidney." At best our efforts thus far are directed only at symptomatic relief. Also of importance is the fact that, though there is no known cause, there are many factors which greatly aggravate the disease. We must not think in terms of drug therapy relieving these aggravations, but we must turn our attention to the hypertensive individual as a subject for study. It is at this stage that a wise and patient physician renders his most valuable service to the hypertensive patient.

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The first and most important step in treating the patient with hypertension is imparting to him the knowledge of its existence. The physician must have a real knowledge of the personality of the patient, for there must not be a stereotyped approach to one with hypertension. The patient's entire future course can be altered either for better or for worse. The physician should realize that the patient with essential hypertension has a hereditary tendency to disease, and is born with, or in very early life begins to show certain physical and emotional reactions to his environment which we term the hypertensive personality. Such a personality results in the development of various psychoneurotic symptoms in many cases. It is most important to refrain from expressing anxiety or concern over the blood pressure. We have often seen a doctor or a nurse whistle when taking a blood pressure as an expression of surprise, alarm, or distress, and such can do irreparable damage to the psyche of the patient. In the majority of individuals it is best not to mention the exact blood pressure reading, because by so doing the patient becomes point conscious and from then on will be in either a state of unwarranted jubilation or a state of depression depending on the slight variation of the point reading. It is most important at this time to explain to the patient the really excellent prognosis of the disease if he will follow a few simple measures.

It is well at this point to tell the patient of the successful cases he has had, never mentioning a case by name. I often mention two patients whom I have watched with interest. The first I have watched for fourteen years and have never seen her blood pressure less than 260/140. The second I have observed for ten years and have never seen her blood pressure less than 280/150. Both of these women are relatively asymptomatic and carry on their duties as housewives. It is interesting that the second patient consulted me because a friend told her that she, too, had high blood pressure and was under my care and that I never told her just what her blood pressure reading was, but always assured her that should any complication of high blood pressure arise, I would handle it as best I could. The patient with severe hypertension said that previously she had consulted her physician about once a week at which time her blood pressure was taken and each time she would come away from the office quite discouraged and depressed because of the extreme height of her blood pressure and because of the weekly admonitions and warnings given to her by her physician. For ten years now I have followed this patient, and I always tell her that her blood pressure is perfectly satisfactory but never reveal to her the exact reading. I never see her more than three times a year.

I believe the only justifiable reasons for having a patient return to the office for repeated checks on the blood pressure (such visits should be very infrequent, not over three or four times a year in the average case of hypertension) are: (1) Reassurance to the patient. (2) Adequate determination of the progress of his disease not according to the height of his blood pressure but according to the size of his heart, the decrease in his renal function, and the cerebral changes as evidenced perhaps by eyeground changes. (3) Cardiac evaluation, determining the size of his heart, the appearance of the electrocardiogram and determining whether left heart strain is appearing. Should these three or four criteria show quite progressive changes and deterioration, then in spite of our present day medical care we should consider the possibility of sympathectomy.

It seems so difficult for us to realize that blood pressure is not an entity in itself but simply one small expression of a fundamental disease which has many more important expressions than the height of the blood pressure. We often see far greater disease process in a patient with blood pressure around 170/110 than in one with blood pressure of 220/120. Dr. D. W. Atchley gives us good advice when he says: "Do not take the cowardly course of mentioning every serious possibility, remote though it may be, merely to be on record against the event. It is comforting to the patient to indicate that no alteration of life is necessary other than which is wise for anyone of his own age provided he be over forty-five. It is rare that a career will have to be completely interrupted and this should never be suggested on the first visit."

Until we do have definite knowledge of the cause and cure of hypertension, it is imperative that the clinician be an optimist concerning blood pressure. If he is not, pessimism will be projected on to the patient with no possible beneficial results but with many deleterious ones. It is important to impart to the patient the knowledge we have that patients exhibiting lability of blood pressure often to abnormally high levels are not necessarily predestined to develop established disease. Also they should know that hypertension developing in later life is either of an unusually benign type or is due entirely to unrelated arteriosclerotic factors; and that these patients have a normal life expectancy and the incidence of pathological changes is similar in most respects to a normotensive population of the same age group. In the series of hypertensive cases carefully studied by Dr. George Pererro for a period of ten to twenty-seven years with average duration of seventeen years he came to the conclusions that the initial height of blood pressure, the symptoms such as headache, palpitation, the presence of cardiac enlargement, minimal albuminuria, minor electrocardiographic changes, and retinal arteriovenous compression bore no relationship to prognosis and that essential hypertension may be compatible with many years of survival and well-being.

It is important to lend a sympathetic ear to the many symptoms of which the patient with high blood pressure complains. Because of the great pressure of time under which most physicians are required to work it is a great temptation to simply take the patient's blood pressure using the blood pressure instrument as an artificial fort to protect us from the time-consuming effort to explain his symptoms. We must not yield to this great temptation to explain the patient's symptoms of headache, dizziness, fatigue, nervousness, irritability and insomnia purely on the basis of high blood pressure. We actually know that most of these symptoms are just as common in people with low pressure as in people with high blood pressure. We are doing a great injustice to our patient and are not being honest with ourselves if we attribute these many symptoms to the high or low blood pressure as the case may be. We must take the time to explain to the patient that actually the various symptoms of which he complains have little or nothing to do with the level of the blood pressure, but are an expression of his emotional and nervous make-up. It is our duty to search for the precipitating emotional factors and to try to help the patient, and attempt to remove the factors, to better understand his problems, aid in finding some substitution for his problems and to aid him in making a better adjustment to the inevitable problems that might arise. Always we should reassure the patient that the headache, the dizziness and the pain in his chest are not due to the blood pressure and are not forerunners of some serious complication such as a stroke or heart failure.

Diet

Little time need be spent in discussing this aspect. As everyone knows, all sorts of diets have had their ardent advocates; the low protein, the high protein, the low salt, the sodium free, the low fat, and the rice diet. Such a wide variety of diets in itself proves that the diets thus far recommended have little or no specific value. However, the literature is filled with those who say the rice diet is of no value and others who strongly advocate it. It is my belief from personal experience as well as from reading the literature that there is little doubt that a goodly number of patients who rigidly adhere to the rice diet or Kempner's regime will show a substantial drop in blood pressure, and perhaps a retardation of the primary pathological process. However, following a strict Kempner regime is almost impossible unless the patient is in an environment where everyone else is eating in a rice house or is on the same diet. Occasionally, there is an exceptional type of individual who will follow the diet, cooperate and benefit considerably from such a regime.

In regard to the rice diet as well as to a drastically low cholesterol diet, Dr. Dock states that the patient should be informed that on such a regime life will not only seem much longer but statistically it may actually be much longer.

Therefore, it would seem that with our present knowledge one should prescribe a normal, well balanced diet for hypertensive individuals, with the number of calories depending on the weight of the individual, and perhaps some protein limitation for those patients with severe kidney damage.

I must admit without any sound justification that I prefer to give my patients a low fat diet. It is an easy way to reduce the obese, and if there is any virtue in a reduction of the Gofman Bodies, this can be accomplished. I might add that the losing of excess weight rarely has any permanent effect on true hypertension but it certainly does seem to take a very definite load off of the heart.

Rest

This is of utmost importance in the treatment of patients with hypertension or any cardiovascular disease, and they should be urged to rest for an hour in the middle of each day. After doing this for a few weeks they all realize that this is one of the most valuable habits they can form, and they usually cooperate very well. These patients should rest in bed for eight hours each night, and if unable to sleep after psychotherapy, then a mild sedative as ¾ grain of Seconal should be prescribed. If possible, these patients should have a week away from their work every three months.

If the hypertension and nervous tension state is severe, patients get considerable relief by remaining in bed one Sunday out of each month.

Exercise

In the average patient with hypertension exercise is usually permitted as it would be permitted in normotensive persons though it may be important to ask the patient not to engage in vigorous or competitive exercises. Such sports as golf, hunting, fishing, horseback riding, and hiking are not only harmless but are strongly advocated. (It is important to note that we are not attempting to deal with the complications of hypertensive cardiovascular disease such as early heart failure, etc.)

Habits

It is well for the hypertensive to pay special attention to normal hygiene. He should eat slowly and should have regular elimination. It is important that he be instructed not to do anything that might result in the Valsalva experiment such as straining at the stool, lifting heavy objects, or any such maneuvers that will suddenly cause a rise in blood pressure. Certainly this must be the cause, along with arrhythmias, that results in so many vascular accidents.

Regarding the use of tobacco. The answer to this is not clear. It cannot be doubted that in many individuals tobacco causes very definite vasoconstriction. Therefore, it would seem wise to restrict the use of tobacco, certainly for a trial period to see if there is any beneficial effect on the blood pressure. Here again one must know the individual and carefully weigh any possible benefits against many emotional problems that often arise when tobacco is discontinued.

It is now popular to tell all hypertensives to take cocktails before evening meals because of the relaxation and vasodilatation that result. Here again one must consider the individual, never losing sight of the fact that alcoholism is a worse disease than hypertension. I have seen several cases of alcoholism have their inception from the advice of the physician to take alcohol as a relaxer. Coffee, tea, and other beverages do not seem contraindicated unless they aggravate the emotional state of the patient.

Drugs

In discussing the drug treatment of hypertension I think it well to refer to the work of Dr. David Ayman who in 1930 analyzed the literature and disclosed that: "The successful treatment of essential hypertension by the use of many methods of treatment has been reported at least two hundred times in the preceding decade." Since 1930 there must have been at least four times as many articles on the Successful Treatment of Hypertension. However, the constant employment of new drugs and methods which usually are discarded after brief popularity indicates that none of these methods are actually specific.

I believe that the same holds true today as in 1930, though it does seem that we are on the eve of some really great discovery for the control of the hypertensive state rather than the cure of the disease. It is important to again point out that whatever method we might employ in treating a hypertensive individual, there is usually considerable relief. I have always been impressed with the work also done by Ayman in which he treated forty hypertensive patients with dilute hydrochloric acid using 10 drops in a little water before meals for a period of about four months. Thirty-three or 82 per cent of these showed marked improvement both in blood pressure levels and in their symptoms, particularly the symptoms of insomnia, headache, nervousness, fatigue, weakness, loss of appetite, dyspnea and dizziness. Obviously, this placebo used by Dr. Ayman certainly could have no effect on the actual pathological process of the hypertension. There is only one explanation for these universally successful results in the treatment of symptoms of hypertension, namely, that the symptoms associated with essential hypertension are so frequently of psychic origin that they may be relieved by suggestion inherent in any drug or method utilized by the physician.

It is my firm conviction that at the present time the only drug available to the physician and of any proven value in aiding the patient with hypertension is some mild sedative such as phenobarbital gr. ½ three times a day, and perhaps potassium thiocyanate. There is absolutely no factual proof of any true value of many other preparations that are used in treating hypertension, such as the nitrates and other such drugs commonly known to us as Stolic Tablets, Nitranitol, Manitol, Erythrol, Tetranitrate, Theominal, Octan, Banthine, T S C Tablets, Veratrite, and Veraloid.

I think the last, that is the veratrum viride preparations, have recently come in for the most voluminous reports in the literature and, indeed, as in all other drugs there have been rather excellent reports on moderate reduction of blood pressure. This drug has been in vogue during several periods for the past many years, always to be discarded as most of the others. I might say that I have followed the exact schedule as recommended in the treatment of fifteen patients with hypertension with the use of Veratrite and not in one hypertensive have I had any more lowering of blood pressure than we had already obtained with psychotherapy and phenobarbital.

The newer, rather dramatic drugs that are sympatholytic are worthy of note and may prove extremely beneficial, but certainly at this time are in the experimental stage and probably are not ready to be used by the clinician on his private patients. Bistrium bromide of Hexamethonium (C_6) is a potent ganglionic blocking agent and inhibits the transmission of nerve impulses through both the sympathetic and parasympathetic ganglia of the autonomic nervous system. It probably has some value in the treatment of peripheral vascular disease and in episodes of severely elevated blood pressure crises.

Apparently, the same can be said of Ciba's preparation, Apresoline, a brand of hydralazine hydrochloride, though this drug is slightly more effective than Bistrium, slightly less toxic, can be taken orally as well as parentally, and acts in an adrenolytic and sympatholytic nature. However, this too has many side effects and toxic reactions, and is far from the desired drug, although we put most hope in it.

I think that we must mention potassium or sodium thiocyanate. Time will not permit a desired discussion of this drug. Suffice to say, there is only one indication for the use of this rather dangerous drug. It should be restricted to those patients who have high blood pressure with associated severe headaches who have not been relieved by the aforementioned regime and in whom sympathectomy is not advised. In a good majority of these patients the headaches will be relieved and blood pressure lowered slightly. However, to use this drug one must watch the blood level frequently as there is a very narrow margin between the therapeutic and toxic levels.

Summary

My thoughts may be summarized by making a plea that all of us recognize that high blood pressure is in itself only one evidence of a general systemic process. We must approach patients with essential hypertension with an optimistic attitude and simply use good common sense in helping them adjust their lives so that they will strive to be moderate and happy in their way of living.

Finally, let drugs be our last thought in the treatment of hypertensive individuals until there is developed a drug of undoubted proven value.

THE SURGICAL TREATMENT OF HYPERTENSION: EFFECT OF SYMPATHECTOMY ON LIFE EXPECTANCY*

HARWELL WILSON, M.D.,† Memphis, Tenn.

The importance of hypertension as one of our most serious medical problems is readily appreciated when one realizes that cardiovascular disease is the leading cause of death. Studies by the Metropolitan Life Insurance Company reveal that cardiovascular disease accounts for almost five times as many deaths each year as does cancer. Hypertension is one of the most prominent symptoms of cardiovascular-renal disease. Because of the frequency and seriousness of this malady it behooves all clinicians to lend every effort to conquering the problem.

Diagnosis of Essential Hypertension

The diagnosis of essential hypertension is made by a process of exclusion. This is true since by definition essential hypertension is a type of elevated blood pressure for which no cause can be demonstrated. There are many theories advanced and much worthwhile study has been given to factors which aggravate high blood pressure and to effects which may be produced by the elevated pressure. However, the true cause of this condition remains unknown.

Types of Hypertension Other Than the Essential Also Amenable to Surgery

Unilateral Kidney Disease with Renal Ischemia

Goldblatt demonstrated in the experimental laboratory that the gradual reduction of the arterial blood supply to the kidney over a period of months would frequently result in the development of the hypertensive state. He applied a a small silver screw clamp to the renal artery of the dog and at subsequent operations gradually produced more occlusion of the renal arteries, thereby producing renal ischemia. Animals subjected to this procedure developed an abnormal elevation of the blood pressure.

This observation has led to the clinical observation that in a very occasional patient hypertension may be due to long-standing unilateral renal disease where, as a result of fibrosis from infection or other causes, there has been a significant decrease in the blood supply to the kidney. Nephrectomy has resulted in a restoration of normal blood pressure in some such individuals. Unfortunately, very few patients with hypertension fall into this category.

Adrenal Tumor

It has long been know that certain tumors of the adrenal gland result in the hypertensive state. Surgery offers such patients a definite chance for cure by removing the cause of the abnormality. Grimson has called attention to the usefulness of the drug Regitine in the diagnosis of pheochomacytomas. Although tumors of the adrenal gland may produce hypertension, such tumors are quite rare in comparison to the number of patients who suffer from hypertension.

Coarctation of the Aorta

Until the work of Craaford and of Gross a few years ago, a patient suffering from coarctation of the aorta did not benefit from any definitive treatment. The diagnosis of this condition can usually be established by finding a markedly elevated blood pressure in the arms and an absence of the femoral pulse. The characteristic erosion of the lower border of the ribs may often be seen in an X-ray film of the chest. Many of these patients may now be relieved by resection of the constricted area of the aorta and the performance of an end to end anastamosis of the aorta.

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Indications for Surgical Treatment in Essential Hypertension

It is my belief that patients with essential hypertension whose condition has not been controlled and whose disease is progressing in spite of adequate medical treatment should have the benefit of thoracolumbar sympathectomy. The adjustment of the mode of life of the individual, the use of a low sodium diet, coupled with weight reduction and the proper use of certain sedative and hypotensive drugs, offers a measure of relief for many patients with hypertension. It is true that the majority of patients with this disease have in the past and should in the future be treated by the family physician and the internist. However, in patients in whom the disease is progressing in spite of such measures, serious thought should be given to the possibility of sympathectomy.

Contraindication to Surgery

Severe kidney damage with an associated persistently high nitrogen retention in the blood is a contraindication to surgery since this calls attention to irreparable kidney disease.

We have successfully operated upon patients who in the past have suffered from a paralytic stroke as a result of the hypertension.[1,2] We have also operated upon patients who have recovered from a coronary occlusion and do not consider this a contraindication to surgical treatment. We do not feel that a patient should be operated upon who at the time is in a state of heart failure or who at the time has cerebral edema as a result of hypertension.

Risk of Operative Procedure

A thoracolumbar sympathectomy is definitely a major operative procedure. Under carefully controlled conditions and done by the experienced surgeon, however, the mortality for the operation per se has been no higher than that for the usual case of appendicitis.

Effect of Thoracolumbar Sympathectomy on the Life Expectancy of Patients with Essential Hypertension

Patients with hypertension are known to follow a variable course as regards life expectancy. In a given individual it may be difficult to definitely predict the life expectancy. Keith, Wagener, and Barker[3] at the Mayo Clinic in 1939 were perhaps the first to recognize and to call attention to the fact that following a careful study of the patient, especially the changes in the eyegrounds, that the prognosis varies according to the patient's status when first examined. They reported a series of 219 patients whom they divided into four groups, depending upon the changes in the eyegrounds. After a period of time varying from five to nine years had elapsed, the mortality expectancy figures for each group was determined.

Since this study it has been apparent that any comparison of results from various forms of therapy must be based upon patients with similar findings at the beginning of the treatment. For this reason careful comparisons of the value of various forms of therapy are difficult to obtain and such studies require a long period of observation.

There have been two significant studies which throw light upon this problem. Smithwick[4] compared the results as regards the five-year survival rate in 411 medically treated patients with the five-year survival rate of 538 patients whom he had treated surgically. These patients were divided into four groups according to the criteria of Keith, Wagener, and Barker. In Group I cases, those that were least severe, it was found that in the non-surgically treated cases 37.6 per cent of the patients were dead after a five to ten year period; whereas in Group I cases treated by thoracolumbar sympathectomy only 15.1 per cent of the patients were dead after a five to twelve year interval.

In Group II 50.5 per cent of the patients *not* treated by surgery were dead after five to ten years; whereas only 26 per cent of the patients operated upon were dead after five to twelve years.

Also it is striking to note that in Group III, while an 84.5 per cent mortality was reported for the five to ten year period in the medically treated cases, the rate for five to twelve years of the surgically treated cases of a similar severity was only 45 per cent.

In type IV cases the mortality rate for the cases treated only by medical means was 99.5 per cent, whereas only 56 per cent of the surgically treated patients in this group had died after five to twelve years.

A comparative study of a smaller group of cases treated by medical means alone made with a similar number treated by thoracolumbar sympathectomy has recently been made by one of the nation's most respected cardiologists, Dr. P. D. White[5] of Boston. White reported that the prognosis of patients with the severer forms of cardiovascular change was much improved by surgery. Studies by Hammarstrom and Bechard[6] and Woods and Peet[7] are in agreement with the findings of Smithwick and of White.

Summary and Conclusions

1. Hypertensive cardiovascular disease is one of the serious problems confronting the medical profession today.

2. Hypertensive disease due to adrenal tumor, coarctation of the aorta and to unilateral renal disease may be cured by surgery in many cases.

3. Patients with essential hypertension treated by thoracolumbar sympathectomy have a definitely better five-year prognosis as regards life expectancy as compared with patients given non-surgical treatment.

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Coronary Occlusion in Young Adults. Review of One Hundred Cases in the Services. M. Newman, Lancet, 1, 1045, May 12, 1951.

The author reviews his second fifty cases of coronary occlusion and presents the clinical and pathological observations arising from the study of the combined first and second series of fifty cases each.

Of the 100 English subjects, 99 were male, 91 were soldiers, the others were officers. Ages ranged from 20 to 36.

Ninety-one per cent were graded physically fit, or I, on entry; 8 were graded less fit because of minor defects; one was graded II because of cardiac enlargement.

The majority was of good physical development. Before entry into the services, 14% led sedentary lives and about half had occupations involving heavy labor. Some served overseas, some were in combat.

Symptoms and signs were exceedingly rare. One, complaining of anginal pain and showing a normal EKG was considered to have an "irritable heart"; while cardiac enlargement in a second case was disclosed on entry into service, by physical examinations and was confirmed by X-ray. Some had their coronary occlusion in service, some after discharge. Of this group of 100 cases, 80 had fatal attacks and all but 6 were found dead or died almost immediately after a collapse. Coronary occlusion occurred in 11 persons whose ages ranged from 20 to 24.

Post mortem studies revealed cardiac enlargement in 38; involvement of the left coronary in 40% and of the right in 10%. Both arteries were affected in 45%. About a third showed old and new myocardial infarcts. A similar proportion disclosed a thrombus. In the non-thrombus cases occlusion resulted from gross atheroma or from an atheromatous plaque blocking the lumen. Degenerative coronary changes were characterized by thickening, tortuosity, and calcification—changes similar to those found in older age groups.

Attention is drawn to the existence of advanced degenerative changes in the coronaries of these young adults who appeared to be in excellent health. These observations, the author feels, support the view that genetic influences are the most important factors in the etiology of coronary disease in young people. (Abstracted for the Middle Tennessee Heart Association by Robert T. Terry, M.D., Nashville, Tenn.)

CLINICOPATHOLOGIC CONFERENCE

Vanderbilt University Hospital*

A 49-year-old white housewife was admitted to the Medical Service of Vanderbilt University Hospital on March 5, 1947 because of diarrhea and cramping abdominal pain. She dated her illness to the late Fall of 1945 when insidiously increasing weakness occurred in association with discomfort in the left upper abdomen. She consulted a physician who discovered an enlarged spleen and anemia in the absence of generalized lymphadenopathy. It was said that she had no fever, chills, gastro-intestinal or respiratory complaints.

She was admitted to a Nashville hospital in January, 1946, and a splenectomy was performed. The spleen was examined histologically at Vanderbilt University Hospital and was said to have shown no evidence of pathological changes to explain the splenomegaly. She apparently improved during her 3 weeks of hospitalization and continued improvement occurred during 3 months of convalescence. She was able to resume her housework.

In July, 1946, she suddenly developed severe abdominal pain, nausea, vomiting, fever, and apparently collapsed. After 2 days in a local hospital, where she was given only sedatives she was admitted to the Surgical Service of Vanderbilt University Hospital. The record of this admission was lost. Operation was deferred. Two days after admission she had a generalized, erythematous eruption, associated with the development of profuse, watery diarrhea and abdominal cramping.

This had not entirely subsided at the time of her discharge from the hospital, and it apparently persisted during the following 8 months until her last admission. However, the frequency of stools diminished from approximately 15-20 per day to no more than 4-7 per day. The stools never contained pus or blood, but were described as being liquid and varying from yellow- to cream-colored. Abdominal cramping pain was so severe at times as to require the use of opiates. She was troubled by fever and night sweats, and lost weight continuously. Weight loss amounted to 52 lbs. during the latter 8 months and to 109 lbs. during her entire period of illness.

About 3 months prior to her last admission she developed thrombophlebitis in the right lower extremity, with fever, severe pain, local heat and swelling. This was treated in a local hospital with penicillin. A similar affection of the left leg developed after the first had subsided. The latter had not entirely disappeared at the time of her admission to Vanderbilt University Hospital.

A review of her past and personal and family histories yielded no significant information. System review was non-contributory except for nocturia, 2 to 3 times nightly, for many years. Respiratory complaints were specifically denied, as was skin pigmentation and craving for salt.

PHYSICAL EXAM: T 100° R 20 P 90 B.P. 90/75. She was an extremely emaciated, chronically ill woman complaining of abdominal cramping. The skin was dry, and a blotchy, purplish color was present over the abdomen and posterior trunk (said to be a result of the skin rash 8 months previously). No areas of brown tanning were noted. There was no generalized adenopathy; a soft, palpable node was present in the left axilla.

The eyes were not significantly abnormal except for atrophy of the lower half of the right retina. Several vesicles, some crusted, were present on the lower lip. The mucous membranes of the mouth and pharynx were clear except for injection of the pharynx. Thyroid and trachea were normal. Impairment of the percussion note was present in the right infraclavicular region and at both bases posteriorly. No significant changes in breath sounds were observed and rales were not heard. The heart was not enlarged, the rhythm was regular, and there were no murmurs. The abdomen was flat, very tender, tense and doughy in consistency. Apparently no localized muscle spasm was present. No masses were palpable, and free fluid seemed absent. Peristaltic sounds could be heard without the use of a stethoscope. Pelvic and rectal exams were not done. The extremities showed no clubbing. There was soft 2+ edema to the knee on the left and a trace of edema on the right. The reflexes were normally active.

Laboratory Examinations:

Urine:

Appearance: Amber, cloudy
Sp. Gr.: 1.020
Reaction: pH 6
Albumin: Negative
Sugar: Negative
Urobilinogen: Positive
Micro.: 3-5 WBC; no RBC; occasional granular cast

Stool:

Appearance: Gray-green, soft
Bile: Positive
Blood: Negative
Parasites: None, including ova
Fat: No excess
Acid-fast bacteria: None seen

Blood:

RBC 3.81 Million—MCV 94
Hgb 11.3 Gm.%—MCH 29
PCV 36%—MCHC 31
ESR 11/4
Wassermann and Kahn tests negative
Agglutinins negative against typhoid H & O; paratyphoid A & B

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WBC 7,550-6,350

Differential: Stabs 8%, Segmenters 80.5%, Eosinophils 1%, Lymphocytes 10.5%, Monocytes 5%

Smear: Adequate platelets; no malarial parasites; Otherwise not remarkable

Icteric index 6

NPN 23 mg.%

CO_2 57.9 vols. %

Cl 89.1 meq/L

TSP 4.76 Gm.% (Alb. 2.55; Glob. 2.21)

Carotene 35 ug%

Vit. A 53 I.U.

Tocopherols 0.81 mg.%

Gastric Analysis: Bile present. No free acid on fasting or after alcohol. 14 free acid after histamine.

COURSE IN HOSPITAL: She was given paregoric in an attempt to control her diarrhea, and was placed on a liquid, high-calorie, high-vitamin diet. Parenteral fluids were necessary in addition, and she received a 500 ml. blood transfusion. Spiking fever continued with daily elevations to 101-102 . She ceased having stools, and it was noted that she was becoming distended on March 7. This situation apparently relieved itself without intervention. Because of her worsening condition, tube feedings were instituted. By March 10 she appeared moribund and the abdomen had become "fairly boardlike." Later in the day she expired quietly.

DR. HUGH J. MORGAN: I have the feeling that I am faced with a very difficult situation here on the clinical side, and am sure the staff felt the same way at the time of this patient's admission to the hospital. I take it that the reason we do not have some very essential information about this case is that she was much too sick for certain examinations. It would have been very comforting indeed and probably helpful, maybe even diagnostic, to have had a careful gastro-intestinal X-ray examination and a careful proctoscopic examination. Just these two things alone, and possibly a biopsy might have helped us. However, as I said, all these things were not done I suppose because she was too sick. So we have to take what has been given us and try to make a diagnosis. As far as I'm concerned, I do not believe a diagnosis, a reasonable diagnosis, a diagnosis based on adequate reasoning or adequate foundation, is possible. We have no basic information here.

Tuberculous enteritis comes to mind. The preponderance of enteric symptoms, but with a paucity of peritoneal symptoms until terminally, makes the diagnosis of a tuberculous process unlikely. It would be an unusual illustration of such disease.

When one tries to relate the story to possible malignancy of the pancreas one faces a similar problem. To be sure she had a wasting disease. The features of her illness, the combination of long-continued diarrhea, fever, and cramping pain are pretty difficult to relate to carcinoma of the pancreas. This woman had hyperperistalsis for many months of her life, with pain due to excessive smooth muscle spasms in the small intestine. It is most difficult for me to think that a localized neoplasm in the body of the pancreas should give such manifestations.

Could one postulate abdominal carcinomatosis originating in the pelvis? Pelvic carcinoma of the ovary with abdominal metastases but without a palpable tumor or tumors seems an unlikely diagnosis.

Chronic ulcerative colitis is certainly a condition to be considered in the differential diagnosis. However, to have had chronic ulcerative colitis for a year and a half and then to die, without a history of having had blood and mucus in the stools, would be a very, very uncommon circumstance. Even in the absence of diarrhea, blood and mucus in the stool are common in chronic ulcerative colitis. One has only to remember what the lesions and the bowel look like to recognize the certainty of bleeding at some time. Therefore, in this case, I am conditioned against serious consideration of the diagnosis of chronic ulcerative colitis in the absence of a story of blood and mucus. Blood in the stool is so conspicuous it is hard to believe the patient could have overlooked it. A proctoscopic examination, of course, would have settled the matter in this case. Furthermore, chronic ulcerative colitis would have caused a leukocytosis and probably a spiking temperature of 101° to 102 . Terminally, in addition to a high leukocytosis one might have expected a positive blood culture, which wasn't made. The terminal event suggestive of obstruction and then perforation would have been perfectly compatible with chronic ulcerative colitis.

The likelihood of regional ileitis going on to death, without there being a mass in the abdomen, nor a fistulous tract either abdominal or perineal is, I think, improbable. Again, a negative proctoscopic examination and positive X-ray findings would have settled the matter, since the X-ray examination is usually quite diagnostic in regional ileitis.

This leads us to raise the question of a nutritional disorder. Could sprue have been this woman's disease? I do not think she had sprue. She had fever, and people with sprue have sub-normal temperatures. She did not have fatty stools as far as we know, and we must accept what we find in the records. It states definitely she did not have fatty stools,—I say, no fat, no sprue.

Abdominal Hodgkins disease must be considered. Hodgkins disease could cause diarrhea through involvement of the lymphoid tissue of the gut. Whether you can call it Hodgkins disease or lymphosarcoma is immaterial, but such involvement might explain the whole picture. Patients with these diseases do sometimes have fever. There is a rare form of lymphosarcomatosis, I have never seen it, but have looked it up, which involves the bowel. It can do just what happened in this case. It could well explain her cramping pain, fever and very marked intestinal dysfunction with poor absorption. It might explain the axillary node which she had. This was not an inflammatory node because it was not soft, tender or hot.

I have thought of the possibilities which I have discussed, and am sure we could name some others. As a matter of fact, when we look at Walter Palmer's list of the causes of diarrhea, we see some of the things I've considered in trying to arrive at a notion as to what disease this case represents. Of all the guesses I might make, I have a feeling that perhaps disseminated lymphosarcomatosis of the intestine might really come the closest. If one is ever going to make a diagnosis with inadequate evidence, today is the time to do it. Perforation with peritonitis was the terminal event.

DR. JOHN SHAPIRO: I think a diagnosis in this case could not be made clinically. It presents numerous interesting features though, and has aroused considerable interesting discussion. So I think it a worthwhile case to present.

At the autopsy examination, when the abdominal cavity was opened, there was generalized peritonitis of an acute sort and about 1,000 cc. of purulent fluid; there were diffuse fibrinous adhesions. The immediate cause of death was undoubtedly generalized peritonitis of an acute type. The reason for this peritonitis was explained when we examined the gastro-intestinal tract. In the jejunum there was an ulcer, some 5 or 6 cm. in diameter, which ran around the perimeter of the gut in an annular fashion. This ulcer had perforated and there were several other ulcers farther down in the gut which had not perforated. In addition to this, on the gross examination, there was hepatomegaly with the liver weighing some 2,000 grams, and showing minute foci of infiltration. The lymph nodes in the abdominal cavity were moderately enlarged, though no specific type of lesion could be found grossly. In the lungs there were a couple of nodules, one in each lower lobe, each described as being about 1.5 cm. in diameter without frank caseation but resembling tubercles. *The gross diagnosis was tuberculous enteritis* and *tuberculous involvement elsewhere.*

However, on the basis of microscopic examination we were forced to change our mind. In the sections from the ulcers of the gut there were innumerable organisms histiologically identical with *Histoplasma capsulatum.* This then was the etiologic agent. This organism was grown on culture from the ulcer of the gut. Numerous acid-fast stains for study were done on various organs and guinea pigs were inoculated. It was impossible to isolate any acid-fast organism.

So our *final diagnoses* were as follows: *Histoplasmosis of the gastrointestinal tract, with generalized peritonitis, due to perforation of a jejunal ulcer; histoplasmosis of the lung, liver and adrenal glands.*

One adrenal was markedly involved with histoplasma infection, though not sufficiently to render it absolutely afunctional, I believe. The abdominal lymph nodes were also involved. This case illustrates something I will mention in passing. It's the reason I called attention to statements in the clinical chart, to the effect that this spleen was normal on histologic examination. Now that was a quotation by someone, and it was an erroneous quotation I am sure because, after the autopsy examination, sections of the spleen were obtained from St. Thomas Hospital, and there were granulomas in the spleen. They could not be diagnosed as either tuberculous or histoplasmosis, or any other type of specific lesion, but certainly were diagnosable as granulomas. So in preparation of the protocol we included only the information in the clinical chart. This is an example of the erroneous information which may creep into charts. The lesions of the lip were not examined since we are not permitted routinely to obtain tissue from that area.

DR. MORGAN: It was not until after the autopsy that we knew the spleen had granulomatous lesions in it. We, on the clinical side, should have gotten an authoritative statement as to what was found in the other hospital to help us determine what was the matter with the patient. That was carelessness on our part. We might not have known, prior to death, that this woman had histoplasmosis, but we would have known, prior to death, that she had an inflammatory process, of a granulomatous type, in her spleen a year and a half before death. (There are several granulomatous lesions one has to be concerned with.) It would certainly be unlikely that she would have had granulomas in the spleen a year and a half before death which did not have some relationship to what killed her.

Well, here we have histoplasmosis again, involving the small intestine, leading to obstruction, perforation and peritonitis terminally and, during a whole year and a half of symptomatic illness, leading to intestinal dysfunction with faulty absorption and loss of food stuffs by rapid elimination. I take it she died perhaps as a result of poor nutrition as much as of infection. However that may be, I think it's a fine case with which to end the school year.

Really, the history of histoplasmosis is Vanderbilt. It's a fascinating thing that it was first here that the nature of the disease was defined. Until Demonbreun's work in the Department of Pathology, it was thought that in some way or another this was a disease due to animal rather than plant life, and that the things we saw in the bodies and lesions represented unicellular organisms not of plant origin. And of course, Dr. Demonbreun settled that point once and for all. And he will always be known as the person who made that terribly important discovery. I think it is also interesting from the clinical side that the first time this disease was ever recognized during life was in the Department of Pediatrics. Drs. Dodd and Thompkins found the organisms in the blood of an infant and for the very first time in history a diagnosis of this disease was made antemortem. Dr. Demonbreun found that dogs had the disease and this made possible the study of the disease as it had never been studied before in the living animal. (It is epidemic, at times in kennels.) Within your medical lifetime the infectious agent has been found for the first time outside the living organism. Before that you had to assume the fungus did exist somewhere, but there are now a fair number of reported instances of its isolation. The second time it was isolated from nature was in this region under the stimulus of Dr. Christie and his group. Perhaps the most important single thing that has been done, from the clinical point of view, in relation to this disease, is the demonstration by Drs. Christie and Peterson that this disease is almost surely responsible for a high percentage of the pulmonary calcification we have been calling tuberculous. It was in Dr. Goodpasture's department that Dr. Demonbreun had his training and did the work that set off a series of developments which has made the disease one about which we now know a great deal. It is a disease about which, only a few years ago, we had no ideas concerning its etiology.

Hyperglycemia in Coronary Thrombosis, Ellenberg, M. Osserman, K. E., and Pollack H.: Diabetes 1:16, 1952.

Seventy-five cases of coronary thrombosis with postmortem examinations have been correlated from the standpoint of clinical observations and pathologic findings. Transitory hyperglycemia or glycosuria have been reported with an incidence as high as 50 per cent. Blood value levels were nearly always less than 200 mg. per cent. The cases were divided into two groups, diabetic and nondiabetic. Fifteen cases (20%) were nondiabetic-hyperglycemic, and 45 cases (60%) were nondiabetic-normoglycemic.

The most striking clinical difference between the hyperglycemic and normoglycemic groups was the presence or absence of shock. In the group showing an elevation of blood sugar, shock was present in all cases except one; whereas, it appeared only twice in the normoglycemic group. The survival time of the hyperglycemic group was one-third (6.3 days) as compared with the normoglycemic group.

Thirteen of the 15 patients with hyperglycemia had central liver cell necrosis; whereas, only 2 of the 40 normoglycemic cases showed this pathologic finding. The authors believed that the sequence of events in the production of hypoglycemia was as follows: (1) The insult of the occlusion results in shock. (2) There is an immediate outpouring of epinephrine, which stimulates hepatic glycogenolysis. (3) As shock continues, the adrenocortical mechanism comes into play, and a sharp increase in gluconeogenesis results. (4) Vasospasm is active and produces local anoxia. (5) The spasm and anoxia eventually lead to central liver cell necrosis.

In the 11 diabetic patients with shock, liver cell necrosis was present in 9 of them. The pathologic pictures were identical with the necrosis seen in the nondiabetic cases in which hyperglycemia and shock were present. Hyperglycemia is a clinical manifestation of shock, and central liver cell necrosis is an anatomical manifestation of shock. (Abstracted for the Tennessee Diabetes Association by Cleo W. Stevenson, M.D., Memphis.)

FOUND—Gabardine Topcoat at Middle Tennessee Medical Association Meeting, Shelbyville, November 20, 1952.

Owner write Secretary,

FRANK G. WITHERSPOON, M.D.
2122 West End Avenue, Nashville, Tennessee

The President's Page

GP MAY WELL BECOME SYNONYMOUS WITH PG

Dr. Smith

The General Practitioners' official organization is casually known as the GP movement. The progress made by that group in bringing Postgraduate Education to its members is worthy of commendation. It occurs to me that "GP" may well become the symbol of PG study.

The Tennessee Academy of General Practice should be proud of its Postgraduate Courses, most of them of a pioneering nature. The TAGP is stressing an intensified campaign to have all of its members keep abreast—almost ahead of the swift advances of medical science. The organization is doing a fine job in this field, its primary function.

The TAGP is sponsoring, through its State and Local Chapters, three new types of PG courses. They were reported by Dr. C. B. Roberts of Sparta, President of the TAGP, in his address at the recent Symposium on Respiratory Diseases in Knoxville. We want to relay this report to the entire membership of TSMA in this page.

First, the Andrew Jackson Academy of General Practice has completed the first year of a PG course covering Middle Tennessee, in which Vanderbilt University School of Medicine provided the lectures. This course made it possible for the GP to build up from 20 to 30 hours of formal education in one year. In addition to the monthly evening classes, the doctors may attend two day-long "classes" at Vanderbilt during the year and add some 10 hours more credit toward maintaining membership in the American Academy of General Practice.

It is significant that this year-long course cost the Treasury of the TAGP the small sum of approximately $300. This may well be watched by the TSMA as a pilot test.

Second, the Five-County Medical Society and the TAGP are conducting another new-type of program. The world-wide pharmaceutical courses and laboratories provide one speaker each month to lecture at Cookeville. This course will make available approximately 20 hours of formal education within a year. The cost to the Five-County and TAGP is—zero. I was privileged to hear the first lecture. I might add that the subject was presented in excellent style.

The third innovation sponsored by the TAGP was the recent compact (one-day) Symposium on respiratory diseases in Knoxville, in which the Knoxville Academy of Medicine shared the sponsorship. The symposium consisted of outstanding speakers. This meeting was the first of its type, in the nation, in that Lederle Laboratories provided all the speakers and paid all the expenses. Yet, Lederle, in a most self-effacing manner, did not mention a single product it produces. Nor was there any exhibit of products whatever.

At the Knoxville meeting, Dr. H. L. Monroe of Erwin, a GP leader and Councilor of the TSMA, reported that 53-plus per cent of some 450 GP's have taken at least one complete Postgraduate Course within the past three years. He gave other figures from a recent survey showing that GP's of Tennessee are well ahead of many other comparable areas in keeping abreast of the march of medical science.

It is hoped that all GP's will support this program and demonstrate to others what can be done. Only those who fail to attend these meetings have cause to regret.

Daugh W. Smith

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DECEMBER, 1952

EDITORIAL

CAT SCRATCH DISEASE

Non-bacterial Regional Lymphadenitis is another name given the viral disease transmitted by the scratch, at times the bite, of cats.

Though this was first recognized as a clinical entity in 1932 by Foshay, it has not been known to the medical profession generally until in very recent years. It is probable that many physicians have seen instances of the disease but have not recognized it. American investigators found a tuberculin-like reaction in victims of the disease with an antigen prepared from affected lymph nodes. Between 1947 and 1951 papers on the clinical aspects of the disease appeared in the French literature, after the visit of a Frenchman to Foshay's laboratory. French investigators found a serologic relationship to the lymphopathia venereum—pittacosis virus group. The first reported case in the American literature was published in 1951.[*]

Recently Daniels and McMurray[†] reported 60 cases, 24 of which were personally studied, the remainder being patients tested with antigen supplied by the authors, clinical data being furnished by their attending physicians.

Most of the cases were found in those below twenty years of age. Geographically they have occurred in fifteen states, Hawaii and Canada. All but five could recall exposure to cats. Thirty-three had had a scratch in the region drained by the affected nodes; three had been bitten by cats; in 14 cases the information was inadequate for establishing the mode of inoculation. The authors had seven household epidemics affecting sixteen persons. Cats seem to be temporary carriers since they react negatively to cat-scratch antigen. The disease is unknown to veterinarians.

The primary lesion, usually in an unclothed area, at the site of inoculation is either the whole or a portion of the scratch, or a papule raised and inflamed, (at times suggesting insect bites) again as a purple or dusky red scar. The time interval from inoculation to primary lesion seems to be from three to seven days.

The lymphadenopathy appears to develop in from a matter of a few days to as long as forty days. The most frequently involved nodes, as would be anticipated, are the axillary ones, though cervical and inguinal lymphadenopathy is not infrequent. The nodes may be tender or non-tender, at times are fixed, rubbery in consistency with redness and heat of the overlying skin. Suppuration with sterile pus developed in 22 of the 60 cases.

The systemic symptoms of fever, usually mild, at times high, lasting from 3 to 5 weeks, malaise, anorexia, weakness, lassitude, aching and headaches are common. Six of the 60 had a rash of a maculo-papular type. There have been instances of the so-called Parinaud's oculoglandular syndrome, proven to be examples of cat scratch disease. Most of the cases had leucocyte counts of 7-31,000. The antigen used by the authors was prepared from nodes removed surgically in the same manner we used to manufacture the Frei antigen for testing for lymphopathia venereum before the days of Lygranum. All 60 cases reported by Daniels and McMurray reacted positively to the antigen. Cultures from lymph nodes were sterile. Agglutination tests for tularemia and heterophile antibodies have been negative; Frei tests were negative.

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[*] Your editor studied an unreported case with Dr. Ralph Larsen in 1947.

[†] Daniels, W. B. and McMurray, F. G.: Cat Scratch Disease; Non bacterial Regional Lymphadenitis: A Report of 60 Cases, Ann. Int. Med. 37:697, 1952.

Unquestionably all of us have seen instances of this disease but have not recognized the true etiology. Tularemia is the disease most likely to be confused with cat scratch disease. However, Daniels and McMurray point to cases thought originally to represent lymphomas, tuberculous adenitis, lymphopathia venereum, infectious mononucleosis, thyroglossal duct cyst and pyogenic lymphadenitis.

If one of the pharmaceutical houses will produce an antigen from the chick embryo similar to the Frei antigen Lygranum, all of us will have a means of classifying at least some of our undiagnosed lymphadenopathies which we see at intervals.

R. H. K.

* * *

THE CONSULTANT IN THE ROLE OF INSTRUCTOR

Postgraduate education of the physician is generally thought of in terms of attending lectures, demonstrations and clinics at some medical center, or by a circuit riding or visiting instructor in the doctor's own community. "Continuation instruction," if it is feasible, is the better instruction. Here the consultant or visiting instructor can use the doctor's own patient as the subject for developing the new thinking in given diseases and in reviewing unused knowledge of past days. This type of instruction is used rather extensively in certain areas of the country. In some it is by circuit-riding instructors from the state university, the instructor consulting with the doctor at the bedside, at the local hospital or in the home. In other areas the doctor is invited to the diagnostic center to which he has referred his diagnostic or treatment problems.

In Tennessee the proportion of general practitioners to specialists is roughly four to one. The one-fourth or one-fifth of the profession in the specialty field probably see many of the diagnostic and therapeutic problems of the general practitioner on a consultant basis. One wonders to what effect these cases are used for continuation teaching! Your editor is in a peculiar position which permits him to be aware of the great variability in consultant's letters after study of referred cases. Some consider the pros and cons of the problem under scrutiny; others give a bare outline of findings and an opinion. Possibly the busy general practitioner does not wish to read a long letter about his patient any more than the busy consultant wishes to dictate a lengthy clinical evaluation. Yet your editor does know that some doctors do complain of sketchy letters by the consultant. If the referring physician keeps case records, it would seem that an adequate letter in the record would be invaluable in some instances for future reference even if the press of work prevents adequate digestion of its contents at the time of its arrival.

Your editor would raise for discussion and thought items in this regard which might well be sponsored by the Tennessee State Medical Association. The referring physician faced with a diagnostic or therapeutic problem can ascertain the general status of the patient from the viewpoint of the history and physical examination as well as any specialist, or even better, if he will. The major reason for reference in diagnostic cases is the utilization of special methods of investigation by the specialist. Commonly these are carried out in the laboratory, X-ray room and the like. They may or may not be reported in detail in the descriptive letter to the family doctor. Even if the consultant thinks the results of tests not significant and therefore needless of description, the referring physician often wonders what "such or such" a test showed, or if it was done. Again, with rapid progress in laboratory procedures the referring physician often does not know the values of reported findings.

What would be the reaction on the part of the general practitioners and of the specialists to something of the nature of the following? If the Tennessee State Medical Association sponsored a form for the reporting of all laboratory results, whether normal or abnormal, EKG, X-ray, biopsy or autopsy, would such a form, if used by the consultant, offer a valuable contribution in carrying the facilities of the medical center into the general practitioner's office? Such a form would need to include, for teaching purposes, the normal limits for each laboratory test. It would save the consultant time in reporting findings; it would give the referring physician the benefit of all findings, normal or abnormal. *It would not replace the consultant's letter.* His duty still would be the communication of what he learned in his history, in his examination with or without special technics and *finally the interpretation of his findings from the diagnostic and therapeutic viewpoint.*

With a little thought the type of form your editor visualizes could be prepared and be passed upon by various specialty groups for the sake of completeness. It could be printed by the State Association and be made available to the specialists at a negligible cost.

Your editor would be interested to hear any expressions of interest on this means of continuation education, either from general practitioners or specialists.

R. H. K.

★

UNITED MINE WORKERS WELFARE AND RETIREMENT FUND

One of the most controversial actors on the national stage is John L. Lewis. His actions and demands are extolled by a great segment of the population and especially by his mine workers. On the other hand, he is considered to be ruthless and dictatorial by those who subscribe to a *laissez faire* attitude toward labor and business. Though he may use government agencies to attain his ends, he cannot be labeled a socialist. He is as much a product of the capitalistic system as is a manufacturing trust, and he said as much at the annual convention of UMWA last October.

No matter what the individual doctor's feelings may be, the profession must be aware of the Lewis philosophy. He has injected into the problem of adequate medcal care a plan of buying medical attention for those of lower economic levels in an open market, without asking a cent from the taxpayer. This philosophy was clearly stated by Lewis in the following:

> "The principle on which this Welfare Fund is written in our contract is in plain words for all men to see, and that principle declares that the men who own the coal mines in this country and who use up the man power of our industry in those mines will pay the cost of that usage and that the finished product, the commodity, the ton of coal that goes into the city bins shall bear its share of the cost of caring for those men, just the same as the cost is provided for rails, lubricating oils, fuels, tipples, cars, taxes or any other item that goes to the cost of production. It is a part of the cost, and as far as I am concerned it will remain a part of the cost of production."

He then goes on to present his philosophy concerning that part of his program of vital interest to the medical profession:

> "I am glad to note also in passing that this plan of the United Mine Workers is not socialized medicine. . . . This plan contemplates the purchase of the services of the medical profession and establishes the best possible service at a fair and just cost. That is free enterprise. That is not socialized medicine. And in this work, more and more as the days go by, the eminent figures in the American medical world are coming to understand more and more the value of this great arrangement in our industry and more and more are extending their cooperation and their helpfulness to make it the most successful of any plan in the country."

(The efficiency of the UMWA Welfare and Retirement Plan is attested to by the expenditure of only 2.7 per cent of total revenue for administrative purposes. This is the efficiency of big business.)

Finally, John L. Lewis believes that his Union has made a great contribution in a free economy, when he says:

> "I have the feeling that in the field of medicine and in the field of industrial research, in the field of industrial hygiene it has made practically a new approach, a new consideration for many of the inherent and tremendous problems which are faced by the medical profession. . . . Our Union recognized that new value can come in our country and under our system of free enterprise only from new production and we encourage that new production. We stand for the usage of all modern equipment and scientific devices and forms that will take the raw materials which God gave our people and make them of increasing value in the marts of trade."

John L. Lewis is buying medical attention on a free enterprise basis and has shown no disposition to alter his course. He knows, from past expressions of opinion, that socialized medicine does not mean the *good* medicine which he is looking for. He, through his medical representatives, has dealt ethically with organized medicine, setting no fees for service, permitting freedom of action on the part of the doctor, but asking only for good medical care. Lewis is probably not a man to ask or to give favors. In dealing with him the medical profession has only to look to its practices,—are they good and honest and are the fees fair. If not, John L. Lewis is unlikely to turn to state medicine for he recognizes its inevitable mediocrity, but he will in one way or another buy that care he desires for his people.

R. H. K.

SPECIAL ITEM

With the approval of the Legislative and Public Policy Committee of the Tennessee State Medical Association, a bill for the licensing of physical therapists will probably be introduced into the Legislature by the physiotherapists of the State.

What Licensing of Physical Therapists Should Mean to the Physician

Odon F. von Werssowetz, M.D.,* Nashville, Tenn.

Physical therapy offers a necessary and valuable adjunct in the treatment of various affections, especially in disabilities of the locomotor system. It is treatment dependent to a large degree upon the individual responsibility of the person actually administering it. The treatment method is selected and prescribed by the attending physician after consideration of the specific needs of the individual patient. No matter how detailed the prescription may be, there will be a number of factors during the treatment period that will vary from day to day, or even from hour to hour. These factors may be pain threshold, fatigue, water and electrolyte balance of the body, variations of atmospheric pressure, etc. The therapist administering treatment must vary and adjust it to meet the needs as prescribed and, at the same time, to do no harm to the patient. One must remember that any treatment or drug likely to be beneficial must be powerful and, if used incorrectly, will cause great harm. Thus the administration of physical therapy cannot be left safely to the haphazard technic of any person who happens to have been practicing massage or electrotherapy over a course of years. Physical therapy is a scientific form of treatment which is constantly being changed and improved in technic. Therefore it can only be properly entrusted to a qualified physical therapist who is thoroughly conversant with modern methods.

The relationship between the physician and the therapist is comparable to that of the physician and the pharmacist in prescribing and dispensing drugs. (Physical agents should be considered as drugs used externally.) The doctor does not have to know how to compound medicines; he tells the pharmacist what he desires. Having confidence in the pharmacist, performing the technical work, the doctor knows that if there is ambiguity in his prescription, it will be called to his attention. The same relationship exists between the physician and a qualified physical therapist.

For the protection of the sick or injured, this relationship should be legalized, permitting only well qualified persons to be licensed for this purpose. Prescribing physicians should demand this for their own protection, as, after all, the final responsibility for treatment rests on the prescribing physician. Only when the physical therapist is licensed by the State will the referring physician know and be assured that his patient will receive the desired treatment in accordance with his prescription and accompanied by all appropriate safeguards. Licensing of physical therapists will assure adequate training and will encourage high standards. Of course it will hurt some persons, especially the irregular practitioners who claim "wonder cures" by physical agents without adequate basis. Licensing of physical therapists would eliminate such assertions.

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*Chief, Physical Medicine Rehabilitation Service, Thayer Hospital and Professor of Physical Medicine, Meharry Medical College, Nashville, Tennessee.

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Licensing also would raise the dignity of such physical treatment to the rightfully high place it has reached in the medical field. It is rather amusing, and at the same time depressing, to drive along our highways and see all sorts of advertisements proclaiming cures that cannot be realized, giving hope where none can be expected, and commercializing on the ignorance of the suffering. Such individuals, working on their own, lack medical knowledge and are not under the supervision of physicians.

Several years ago, while driving through one of the main streets in Chattanooga, I saw a sign about 6 by 9 feet in size advertizing a naturopath who was specializing in all branches of physical medicine. I was told that this individual took a six weeks course somewhere in Florida and thus became a specialist in physical medicine. Normally, it takes twelve years of hard work to become a physiatrist, i.e., an M.D. specializing in physical medicine. There are numerous instances of individuals with inadequate training who have claimed to be physical therapists because they had been graduated from some so-called Physical Therapy School. There is such a school here in Nashville; it is associated with a barber shop. The student first takes a course of instruction in barbering and then is advanced to the postgraduate course in physical therapy, consisting of meager instructions with meager equipment and without clinical material. This type of education is grossly inadequate, but "graduates" of such a school create confusion in the mind of the general public as well as physicians. The busy physician has no time to check the qualifications of all people who represent themselves to be physical therapists.

This chaos can be eliminated if appropriate licensing is required. The patient should be assured of receiving at all times the best medical and scientific care possible. If the use of physical agents is essential, the need can be met satisfactorily only by physical therapists trained to use, with skill and restraint, those complicated measures which are the basis of physical treatment. Good medical care under proper medical supervision can only be assured in this way, because the nationally registered physical therapists are bound by their code of ethics not to practice their skills independently. They accept patients for treatment only if the patients are referred by physicians. Therapists administer treatment as prescribed, reporting progress, complications, or other pertinent observations to the physician.

There seems to be no real major disadvantage to the licensing of physical therapists. There may be some minor disadvantages of which the most important is the scarcity of qualified therapists, but this is only a temporary situation, which is being gradually corrected. This shortage would be reduced materially if a School of Physical Therapy were established at one of our leading medical colleges. I believe that the licensing of physical therapists is desirable and necessary. The law should be specific so that it will protect the public from unscrupulous quacks who, without adequate training, profess to practice physical therapy and who, by their treatment, often cause grave physical and mental harm.

DEATHS

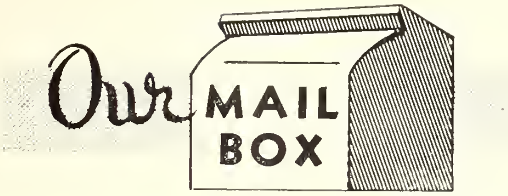
Dr. W. A. K. White, Washington County's oldest physician, died suddenly in his home on October 28, 1952. Aged 83.

★

Dr. Paul DeWitt, prominent retired physician and surgeon of Madison, died suddenly of a heart attack at his home on November 6, 1952. Dr. DeWitt was a member of a large number of professional societies and a 33rd degree Scottish Rite Mason. Aged 74.

★

Dr. William R. West of Knoxville died on November 8, 1952. In his long career, Dr. West practiced medicine in Ashevile, Newport and Knoxville. Aged 91.



Our MAIL BOX

November 25

R. H. Kampmeier, M.D.
Editor—Journal Tennessee State Medical Assn.
Nashville, Tennessee

Dear Doctor Kampmeier:

I would like very much to have this plea published in our State Journal. The various county medical societies call on young specialists in the various fields to give talks at their monthly meetings. We are always glad to go and try to give all we can to our colleagues concerning practical applications of newer forms of therapy and anything else which might be to their benefit. We want to help in any way we can in the dissemination of medical knowledge, as required of us by our Hippocratic Oath. We realize that we are called upon because the older and better established men will not make these trips. Usually we are assured upon completion of our talk, that the presentation has been good and that considerable benefit has been obtained by the local society.

Then the members of the local society keep mechanically referring their cases to the established man and never give the younger man another thought. I think that any doctor will agree that an occasional case referred to a doctor during his first few years in practice will not harm the practice of the older specialists (who probably wish they were not faced with such a full waiting room anyhow). It would give considerable boost to the morale of the younger man to feel that his efforts were appreciated by the referral of an occasional patient from the men to whom he has recently talked. I think that if the practitioner in the small towns will think about this, he will realize that what I have said is true and that he has not sent "just one case" to see if the young specialist really knew what he was talking about.

Very truly yours,
(Name withheld)

*

November 26, 1952

Dear Doctor:

Have you thought about income taxes and savings in the same breath lately?

All of us in the medical profession are faced with daily demands for financial contributions to some worthy cause. Making your decisions about supporting these many causes demands the selection of a plan which will give full utilization of your philanthropic dollar at a minimum cost to you. I feel that it is my personal responsibility to call your attention to certain advantages in the form of tax savings which you may realize by making a contribution to the American Medical Education Foundation.

The basis of our present enviable system of medical care is an equally enviable system of medical education. Your contributions will materially assist in maintaining the upward progress of medical education which this nation has enjoyed for the past sixty years. It is my firm conviction that we cannot fail our medical schools in this time of financial stress. The success of the American Medical Education Foundation will play a major role in the continuing high quality of medical training and health care. It is therefore of the utmost importance that every member of the medical profession give his immediate whole-hearted financial support to this project.

I know you will give this matter your immediate and serious consideration. Write your check today. I shall look forward to hearing from you in the near future.

Sincerely yours,
Louis H. Bauer, M.D.
President
American Medical Association

PROGRAMS AND NEWS OF MEDICAL SOCIETIES

Chattanooga and Hamilton County Medical Society

The society held its semi-monthly meeting on October 30 in the auditorium of the Interstate Building. Dr. J. M. Higginbotham and Dr. Robert J. Boehm presented a summary of a recent meeting of the American College of Surgeons. Dr. Fay B. Murphey, Jr., presented a paper on "Coincident Cholecystic and Coronary Disease" while Dr. Philip H. Livingston discussed the subject.

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The November 13 meeting of the society was a dinner session at the Chattanooga Golf and Country Club. Dr. Henry Doubillet, clinical professor of surgery at New York University, and Dr. Emmerson Ward of the Mayo Clinic, were guest speakers.

*

Knoxville Academy of Medicine

Dr. George T. Novinger was the essayist for the regular meeting of the Academy on November 4. The Academy along with many of the medical societies, sponsored the annual Diabetes Detection Drive during the week of November 16. This was the fourth consecutive year that the Academy has participated in this program.

*

At the November 18 meeting, Dr. Phillip C. Thomas read a paper on "Diabetes Mellitus." Dr. Charles Sienknecht discussed Dr. Thomas' paper. An interesting project of the Academy has been the restoration of the auditorium to its original appearance when it was constructed in 1812 by William Park who completed the original construction begun by John Sevier in 1792. The restoration included reconstruction of the fireplace to its original dimensions adding Belgium black and gold marble. The addition of brass andirons and logs with a hand carved mantel, and with the addition of six Paul Revere type lanterns, the dignity of the room has been greatly enhanced. These lanterns are the exact replicas of those which swung from the tower of the old North Church on the night of Paul Revere's ride. Many members of the Academy shared in the cost and the planning of this restoration.

*

Washington, Carter, and Unicoi Counties Medical Society

The society held a dinner meeting on November 13 at the John Sevier Hotel in Johnson City. The guest speaker was Dr. Eugene Stead, professor of medicine at Duke University.

*

Memphis and Shelby County Medical Society

The regular meeting of the society was held in the auditorium of the Institute of Pathology Building on the night of October 7. Following the regular business session, the following program was presented in the form of a "Symposium on the Fundamentals of Office Radiology."

"Hazards to the Patient, Technician, and Physician," by Dr. Walter H. Mendel.

"Common Errors in Interpretation of Plain Films," by Dr. D. J. Cara.

"Common Errors in Interpretation of Gastro-Intestinal Studies," by Dr. C. H. Heacock.

"Recent Advances in Special Techniques," by Dr. David S. Carroll.

These papers were discussed by Dr. J. Cash King.

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Consolidated Medical Assembly of West Tennessee

The Assembly held its November 4 meeting at the New Southern Hotel in Jackson. At this meeting, Dr. Gene Morrison, professor and chairman of the department of bacteriology at the University of Mississippi, discussed "Infection and Immunity," followed by Dr. A. C. Guyton, professor and chairman of the department of physiology and bio-physics at the University of Mississippi, who discussed "Physiology of Kidney Disease."

*

Nashville Academy of Medicine and Davidson County Medical Society

After dinner in the Vanderbilt University Hospital Cafeteria, the program of the November 11 meeting included a paper on "Pulmonary Resection for Tuberculosis" by Doctors Walter L. Diveley, Douglas H. Reddell and Rollin A. Daniel, Jr., and one on "A Preliminary Report on a New Elbow Joint Prosthesis" by Dr. S. B. Prevo.

On November 25 the Academy met with the Middle Tennessee Heart Association to hear their guest speaker Dr. Thomas Duckett Jones of New York who spoke on "Medical Aspects and Other Needs of the Individual with Rheumatic Fever or Rheumatic Heart Disease."

NATIONAL NEWS

Socialized Medicine Discussed at Two-Day Meeting of Magnuson Commission

Problems of financing medical care, with emphasis on the issue of national *compulsory health insurance*, were argued last week before the President's Commission on the Health Needs of the Nation.

Following are brief quotations from all participants, in order in which they testified:

SEYMOUR E. HARRIS, Ph.D., Professor of Eco-

nomics, Harvard: "The AMA can point with pride to the fact that the factory worker pays only half as large a part of his income for a doctor's visit as he did before the war. But we need to know more about the quality of the service. Does he (the doctor) give less time? Is he more tired and crowded?"

FRANK G. DICKINSON, Ph.D., Director of the Bureau of Medical Economic Research, American Medical Association: "It would take just 54% of a week's wages in 1951 to purchase the same amount of medical care as a whole week's wages would have purchased in 1935-39." . . . Medical care costs as a whole are lagging well behind prices in general. . . . All statistics show remarkable improvement in maternal and infant mortality rates and startling longer life expectancy.

HARRY BECKER, Associate Director, Commission on Financing of Hospital Care and former Social Security Director for CIO: "If we accept the pattern of financing which establishes voluntary prepayment for the families of the currently employed and which, through government assistance, provides the same standard of care on essentially the same basis for non-wage and low income groups—we will close most of the existing gaps in financing care. . . ."

HELEN HALL, Director of Henry Street Settlement, Chairman Subcommittee on Health Needs of the National Federation of Settlements: "Insurance for comprehensive care, with provision for preventative care, is what we need. Voluntary plans protect those in the least need of protection. . . . I object to the whole idea of stabilizing such variable services as those offered by the voluntary plans."

WALTER F. PERKINS, Koppers Company, Inc., and Trustee, Johns Hopkins Hospital: "The sensible thing to do is to encourage the extension of hospital insurance so as to make it available at reasonable rates to all of our people. We must also develop reasonable and adequate medical, surgical and nursing care insurance plans. This will need the active leadership of the medical profession, which so far has been lacking. . . . This is a problem that cannot be solved overnight. England thought so and you all know what happened there."

WILLIAM S. McNARY, Executive Vice-President and General Manager, Michigan Hospital Service: "Health service . . . is bringing into Blue Cross thought an increasing understanding of the importance of maintaining a balance between local or regional needs and the demands of the national economy. Where definite inadequacies exist, Health Service can step in and build up the benefits to the required uniform national levels. Thus . . . Blue Cross is raising national standards without imposing the hobbles of centralization."

DR. CHARLES G. HAYDEN, Executive Director, Massachusetts Medical Service: "Basically this (OASI) is a simple cash transaction and the recipient can do what he pleases with the money. Under federal compulsory health insurance, however, the federal government also proposes to collect the money, but instead of returning money to patients requiring medical care, it would undertake to provide the personal services of physicians. How this could be done without imposing controls on the medical profession I, as the administrator of a medical care plan, cannot understand. . . ."

JOHN H. MILLER, Vice-President and Actuary of the Monarch Life Insurance Co.: "One of the most significant developments . . . has been the growth in availability of protection against catastrophic medical expense." . . . In 1951 benefits which either were or might have been used for medical care costs totaled \$1.7 billion, with \$768 million specifically paid for this purpose.

DR. GEORGE BAEHR, President and Medical Director, Health Insurance Plan of Greater New York: "The many extra charges that doctors are permitted to make under the limited plans deter families from availing themselves of the benefits of preventive medical services and . . . early disease detection. . . . Voluntary insurance will not be accepted as the final answer . . . until it can provide comprehensive coverage to those who want it and should have it. . . ."

I. S. FALK, Ph.D., Director, Division of Research and Statistics, Social Security Administration, FSA.: "Voluntary insurance plans . . . hinder at least as much as help the development of group practice required for advancement of quality of care. . . . If we agree on the need for wider use of insurance, . . . we find that voluntary insurance does not and cannot meet our needs. . . ."

GEORGE W. COOLEY, Assistant Secretary of AMA Council on Medical Service: The phenomenal growth of hospital surgery and medical care insurance is evidence the American people have placed their faith in the voluntary system. In about 10 years, hospitalization insurance coverage has increased 430%, surgical protection 770% and medical care 820%.

DR. VLADO GETTING, Commissioner, Massachusetts Department of Health: The Commission has been spending too much time on how to finance medical care and not thinking enough about how to reduce the risks of poor health. . . . The greatest need is nationwide development of full-time local health departments.

DR. EDWIN L. CROSBY, Director, Johns Hopkins Hospital: "Efforts should be made to increase and expand Blue Cross on a voluntary basis . . . so as to narrow the gap between patients who have difficulty in paying their hospital bills and those who are entirely unable to pay."

DR. WARD DARLEY, Dean, School of Medicine, University of Colorado: "The recent activities of the National Fund for Medical Education and the American Medical Education Foundation in raising funds for medical schools are of significance not only in that they represent an effort to interest the general public in contributing to the support of medical education but also in that these funds are to be given to the schools to be used in any way they think best. . . ."

HAROLD M. GROVES, Professor of Economics, University of Wisconsin: ". . . The case for federal aid to medical education is strong and convincing. . . . It should be our objective to devise a scheme of compulsory insurance . . . perhaps by a 2% income tax for compensation of catastrophic illness."

MICHAEL M. DAVIS, Ph.D., Chairman, Committee for the Nation's Health: "For most of the American people, health insurance should be required by national law. . . . Without a broad and positive national program, I anticipate a mixture of commercial and non-profit voluntary insurance which will be quantitatively insufficient and often qualitatively poor, plus the piecemeal but steady growth of directly tax-supported medical and hospital care. . . ."

E. A. VAN STEENWYK, Executive Director, Associated Hospital Service of Philadelphia: Solution of the problem of meeting the public's bill for medical care of the poor will require participation of government at all levels. Federal grants along lines of the Hill-Burton hospital program to state medical authorities for paying costs for the medically indigent should be tried.

LEON KEYSERLING, Chairman, President's Council of Economic Advisers: During the next 10 years, an additional $100 billion in goods and services may be expected, several billion of which could very well be used to expand health services. Steps should be taken to get these services to the people who need them most, particularly to those who are now unable to afford them.

EMERSON P. SCHMIDT, Ph.D., Director, Economic Research, U. S. Chamber of Commerce: "The enormous progress made by insurance programs in the last decade, covering more groups, smaller groups, higher ages, families and dependents, and features such as hospital, medical care, surgery and catastrophe, indicate what can be accomplished without coercion and compulsion."

NELSON H. CRUIKSHANK, Director, Social Insurance Activities, AFL, and Labor Advisor to Mutual Security Agency: "Organized labor and all wage earners are united in demanding a system of national health insurance for the benefit of all. . . . Labor has tested the voluntary plans and with few exceptions has found them seriously wanting."

HAROLD S. VANCE, Chairman, Board of Directors, Studebaker Corporation: The Company's employee-controlled medical program is receiving full cooperation from the local physicians and the medical society. "Let us go as far as we can on the voluntary basis. It has worked for us and it can work for others."

The Commission reached no conclusions on the issues involved. It met in executive session on October 9 and will hold another three-day closed meeting later this month. Its report to the President is due by December 29.—*From Capitol Clinic, October 14, 1952.*

MEDICAL NEWS IN TENNESSEE

Middle Tennessee Medical Association

The November 20 meeting was held under the presidency of Dr. Thurman Shipley of Cookeville. The following program was presented:

"A Six Year Experience with Vagotomy" by Dr. Lynwood Herrington, Nashville.

"Treatment of Rheumatic Fever" by Dr. Luther Smith, Donelson.

"Carcinoma of the Prostate" by Dr. John Tudor, Nashville.

"Common Lesions of the Cervix Amenable to Office Treatment" by Dr. James Ellis, Nashville.

"Treatment of the Ununited Fractures of the Neck and the Femur" by Dr. Ben Fowler, Nashville.

"Gastro-Intestinal Bleeding in Children" by Dr. Thomas Zerfoss, Jr., Nashville.

"Carcinoma of the Colon" by Dr. Dan Gray, Columbia.

"The Local Examiner's Relation to Life Insurance Examinations" by Dr. B. F. Byrd, Sr., Nashville.

"Functional Gastro-Intestinal Disturbances" by Dr. Aubrey B. Harwell, Nashville.

A dinner was given for the Association by the Bedford County Medical Society.

Officers elected were: Dr. Taylor Farrar of Shelbyville as president-elect and Dr. Frank Witherspoon, Nashville, as secretary-treasurer.

*

University of Tennessee College of Medicine

Mr. Wallace Mayton, medical representative of Parke, Davis Company, will become head of the Postgraduate Department carrying on the activities of the late Mr. L. W. Kibler.

*

The Knoxville Symposium on Respiratory Diseases

Approximately two hundred physicians throughout Tennessee heard top medical leaders discuss various aspects of a symposium on respiratory diseases held in Knoxville on November 14, 1952, at the Farragut Hotel. The symposium was sponsored by the Knoxville Academy of Medicine and the Tennessee Academy of General Practice in collaboration with the Lederle Laboratories. Those attending the symposium were luncheon guests of Lederle at the Farragut and dinner guests of the Laboratories at the Greystone Playhouse in Gatlinburg. Dr. J. B. Naive, Academy President, moderated the morning session and Dr. C. B. Roberts of Sparta, President of the Tennessee Academy of General Practice moderated the afternoon session. Dr. H. L. Monroe of Erwin, Councilor of the Tennessee State Medical Association, and Dr. E. R. Zemp, Knoxville, acted as joint chairmen of the social hour and the dinner at the Greystone Playhouse in Gatlinburg.

The scientific program was as follows for the morning session:

"Epidemiology of Respiratory Diseases in the United States," by Dr. Lawrence Sophian, New York, N. Y.

"The Bacterial Pneumonias," by Dr. Harry F. Dowling, Chicago, Ill.

"Pulmonary Histoplasmosis," by Dr. Hollis E. Johnson, Nashville, Tenn.

"Primary Atypical Pneumonia," by Dr. George W. Melcher, New York, N. Y.

For the afternoon session, the discussions were as follows:

"Acute Pulmonary Tuberculosis," by Dr. Roger S. Mitchell, Trudeau, N. Y.

"The Pathology of Pneumonia Following Influenza Infection," by Dr. Ernest W. Goodpasture, Nashville, Tenn.

"Pertussis," by Dr. Ralph Platou, New Orleans, La.

"Laryngotracheobronchitis," by Dr. Herbert H. Harris, Houston, Texas.

"Empyema and Lung Abscess," by Dr. Duane Carr, Memphis, Tenn.

"Sinusitis," by Dr. O. E. Van Alyea, Chicago, Ill.

* * *

Hill-Burton Hospital Construction in Tennessee

By courtesy of the Washington office of the American Medical Association, the following statistics on Hill-Burton grants in Tennessee is released. As of November 1, 1952, two new projects have been approved in Tennessee. The projects are as follows:

Located at Jonesboro—Washington County Health Center—at a total cost of $65,000, including federal contribution of $33,800.

Located at Ripley—Lauderdale County—at a total cost of $100,000, including federal contributions of $52,000—to supply 14 additional beds.

The new projects bring the Hill-Burton Construction Program in this state up to the following total:

Completed and in Operation: 26 projects costing nearly $22,000,000 and supplying an additional 1,512 hospital beds.

Under Construction: 17 projects at a total cost of $25,000,000 designed to supply 920 additional beds.

Project Approved, but Not Yet Under Construction: 5 at a total cost of $325,000 designed to supply 14 additional beds.

PERSONAL NEWS

Dr. Luke Nabers of Morristown has been chosen by the University of Alabama Alumni to head a program to strengthen his medical alma mater, the University of Alabama School of Medicine.

Dr. B. M. Overholt, Knoxville, Chairman of the Association's UMWA Liaison Committee, has been appointed district surgeon for the L. & N. Railroad, succeeding the late **Dr. Kyle C. Copenhaver.** Dr. Overholt is director of Internal Medicine at Acuff Clinic as well as district surgeon.

Dr. Lester F. Littell, Grundy County's only physician, has been called for duty with the Armed Forces. He has practiced in Tracy City for the past eight months.

Dr. George McSwain of the McSwain Clinic in Paris, announces that a new physician will join the clinic on January 1, 1953.

Dr. John H. Kinser, on leave from the U. S. Navy Air Force, is assisting **Dr. S. Boyd McClary** in Etowah.

Dr. Daniel R. Gray of Columbia, was the guest speaker at a meeting of the Columbia Business and Professional Women's Club recently. Dr. Gray's subject was "Cancer."

Dr. Moore Moore of Memphis, and member of the Board of Directors at Southwestern University since 1924, has been re-named to a four year term.

Dr. Shelton F. Fowler, Chattanooga, has moved into his new office building at 4933 Brainerd Road. The new structure is completely modern in design. Dr. Fowler has been engaged in General Practice in Chattanooga for only a few months.

Five Chattanooga doctors participated in a radio broadcast over station WAGC to discuss the subject of "Tuberculosis." The doctors were **Dr. J. R. Hamilton**, **Dr. G. K. Henshall**, **Dr. Carl Hartung**, **Dr. William E. Denham** and **Dr. Spires Whitaker.**

Dr. James C. Lowe of Cleveland announces that he is being joined in his practice by **Dr. William R. Smith**, formerly of Memphis. Meanwhile, Dr. Lowe has accepted a fellowship from Mayo Clinic, specialization in general surgery. Dr. Lowe will leave Cleveland January 1 and will remain at the clinic for at least one year. Upon completion of his training there, he will return to Cleveland.

Dr. T. Fort Bridges, Nashville, is now a fellow of the American Academy of Pediatrics.

Dr. William J. Von Lackum, Chief Clinical Psychologist at Gailor Memorial Psychiatric Hospital in Memphis addressed the Jackson Woman's Club recently. His subject was "Mental Hygiene for the Child."

Dr. L. Spires Whitaker of Chattanooga, and **Dr. T. W. Alsobrook** addressed the Chattanooga Heart Association recently. Dr. Whitaker discussed "Heart Surgery" and Dr. Alsobrook's subject was "Rheumatic Heart Disease."

Dr. J. T. Mason, McMinnville, announces the construction of a new six room office building and Clinic.

Dr. Sid Witherington, Monford, has announced that completion of the new Health Clinic should be before the first of the year. **Dr. Herman LaVelle** of Memphis will join Dr. Witherington and the clinic staff and later a dentist will occupy offices in the building.

BOOK REVIEW

Physician's Handbook. Lange Medical Publications. Los Altos Calif. University Medical Publishers, 7th Edition, 1952. 380 pages, Price $2.50

This small pocket sized handbook is the product of four writers who are on the faculties of Stanford University School of Medicine and the University of California School of Medicine. To pack into a volume, so small it can be carried in the pocket or in even the smallest of physician's kit, the information which it contains meant a remarkable work of selection and condensation.

It would be impossible to even approach an analysis of all it contains. Outlines for history taking and physical examination are included. The technics used in urinalysis, hematologic examination, renal and liver function tests and blood chemistry are considered. All routine laboratory procedures are described. Bacteriology, parasitology, serodiagnosis and allied fields are related to clinical disease. The tests for endocrine functions are described.

Sections are devoted to diets, infant feedings and fluid and electrolyte balance. Drugs and hormones as to indications, actions and dosage are described for use in disease.

From the foregoing it is obvious that this is a most useful little volume for interne or doctor for quick reference to the ways and means of getting information about a sick person. Every doctor could use it, and it will be useful to the doctor's office technician and nurse. The book is well worth its money.

R. H. K.

* * *

Living in Balance. Frank S. Caprio, M.D. Washington, D. C. 1952. The Arundel Press, Inc. Price $3.75.

This book by a psychiatrist and psychoanalyst was written for the intelligent lay reader. The author attempts to offer to the neurotic a means of self help since the services of a psychiatrist are too expensive, even if available, for most persons.

On the whole the reviewer feels that a good job has been done in this book. Without the jargon and complexities common to many psychoanalysts the author shows up the frustrations, perplexities and confusions which go into the fabric of the psychoneurotic pattern. He relates the fears, prejudices and hatreds of life in terms of mental reactions and psychosomatic manifestations.

It seems very likely that a physician may safely suggest this book to an intelligent layman who has a psychoneurotic personality, if not too unstable, in the hope that he may orient himself as to his illness and what adjustments he should make.

The book will be found very readable for both physician and patient.

R. H. K.

PLACEMENT SERVICE

The placement service of The Tennessee State Medical Association is designed to assist doctors *and communities to get together. Further information and contacts on both physicians and communities are available from the Executive Secretary's office, 325 Doctors Building, Nashville 3, Tennessee.*

★

Location Wanted

Twenty-nine year old physician, single, Methodist, degree U. T., 1946, 1 year rotating internship, 15 months general practice, now flight surgeon USAF will be discharged December, '52. Prefers 20,000-up city. Would consider institutional practice but prefers association with another M.D. Available January 1, 1953.

LW-15

★

Thirty-three year old physician, married, protestant, M.D. from University of Chicago, 1944, interned at St. Luke's Hospital, residencies in surgery at St. Lukes and Hines Hospital. Licensed in Illinois, 1945, Board qualified in surgery, Priority IV, 2 years USMC. Prefers clinic or associate practice. Available July 1, 1953.

LW-16

★

Twenty-eight year old physician, married, Baptist. M.D. degree from Southwestern, 1947. Interned at Jefferson Davis Hospital, Houston, Residency in Urology at St. Josephs Infirmary, Houston. Licensed in Texas and Board certified in Urology. Just out of U. S. Navy in class No. 4 with four years, eight months active duty. Prefers general practice and Urology in a community of 10,000. Would consider an associate relationship but preferably not a partnership. Available any time after January 1, 1953.

LW-17

★

Twenty-eight year old physician, married, three children, Episcopal faith, M.D. degree from Vanderbilt, 1952. Rotating internship, Saginaw General Hospital, 1952. Thirty-two months service with U. S. Army. Class No. 4 with no present service affiliation. Desires to enter General practice in a small community, needing a general practitioner, within referring distance of Nashville.

LW-18

★

Twenty-six year old physician, married, no children. M.D. degree from U. T. in 1951. Presently serving rotating internship at Baptist Memorial Hospital. Available in January, 1953. Licensed in Tennessee. Desires association with another physician in general practice near Nashville.

LW-19

Thirty-four year old physician, married, two children, Protestant faith. M.D. degree from Long Island College of Medicine in 1943. Interned at Yonkers General Hospital, N. Y. Assistant residency in OB-GYN in Franklin Square Hospital, 1945-46. Two years military service.

LW-20

★

Twenty-eight year old general practitioner, married, category No. 4. One year surgical residency. Desires association with surgeon or general practitioner doing considerable surgery. Residency will be completed January 1, 1953, and will be immediately available thereafter. M.D. degree from U. T., 1950. Interned at St. Josephs, 1951. Surgical residency at Baroness Erlanger Hospital in Chattanooga, 1952.

LW-21

★

Thirty-three year old physician, married with two children, Navy veteran with three and one-half years service. Honorable discharge, February, 1952. Draft classification No. 4. M.D. degree from U. T., 1950. Rotating internship, Baptist Memorial Hospital, Memphis, one year residency in OB-GYN will be completed at John Gaston Hospital in December, 1952. Interested in going into general practice in January, 1953.

LW-22

★

A young physician expects to become board qualified in internal medicine in July, 1951. Background includes one and one-half years work in infectious diseases. Two years in the Navy as roentgenologist, cardiologist and internist and three and one-half years of internal medicine. Desires permanent location. Prefers locality for specialty practice with hospital facilities. Second choice would be good location for general practice with predominent internal medicine.

LW-23

★

Physician Wanted

A middle Tennessee Physician is going into military service about January 1, 1953. A general practitioner, he has approximately $10,000 worth of equipment which can be bought at a reasonable price. Present practice is grossing two to three thousand dollars a month. Various financial arrangements possible. Desires physician to take over practice while in service.

PW-16

★

East Tennessee metropolitan general practitioner leaving for Armed Services. Would like someone to take over general practice for two years. Office is well equipped including x-ray. It is located in the suburbs of an East Tennessee city.

Air conditioned, electrically heated. Various financial arrangements possible.

PW-17

★

A Tennessee Red Cross local chapter desires services of a full time physician to direct the collection of blood with the bloodmobile of the Red Cross Service.

PW-18

★

Middle Tennessee physician recalled to active military service in January, 1953. Desires physician of ability particularly in obstetrics and internal medicine to take over his practice for two years. Various financial arrangements possible.

PW-19

★

Western State Hospital is in need of resident and staff physicians. Anyone interested may make inquiry to the Superintendent.

ANNOUNCEMENTS

National Blood Program. The office of Defense Mobilization, Washington, D. C., has recently issued a sixty-page Publicity Manual convenient for use by Red Cross on Civilian Defense Agencies.

National Multiple Sclerosis Society. A series of pamphlets published by this organization, and dealing with physical medical and rehabilitation, for patients having the disease are now available to the profession. These are written for the patients. Anyone interested may write the organization at 270 Park Avenue, Suite 7G, New York 17, New York.

First Aid Manual. A vest-pocket size manual has been published by the Council on Industrial Health and Bureau of Health Education of the A.M.A. These may be purchased singly or in lots from the A.M.A.

STANDING AND SPECIAL COMMITTEES OF THE TENNESSEE STATE MEDICAL ASSOCIATION

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C. S. McMurray, Nashville (1954)
Stanton S. Marchbanks, Chattanooga (1953)
Ralph H. Monger, Knoxville (1955)
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W. J. Sheridan, Chattanooga
J. R. Thompson, Jr., Jackson

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Bedford T. Otey, Memphis (1953)
George Duncan, Nashville (1955)

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R. H. Kampmeier, M.D., Nashville

Public Service
L. W. Edwards, Chairman, Nashville (1954)
H. L. Monroe, Erwin (1953)
C. C. Smeltzer, Knoxville (1955)
W. A. Garrott, Cleveland (1954)
Thurman Shipley, Clookeville (1953)
Ogle Jones, Centerville (1955)
W. N. Cook, Columbia (1954)
J. R. Thompson, Jr., Jackson (1953)
Paul Baird, Dyersburg (1955)
Harold Boyd, Memphis (1954)

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C. B. Roberts, Sparta (1955)
W. C. Chaney, Memphis (1954)
R. B. Wood, Knoxville (1953)
J. Marsh Frere, Chattanooga (1955)

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L. W. Edwards, Nashville (1954)
J. O. Manier, Nashville (1953)
Charles C. Trabue IV, Nashville (1955)

Liaison Committee to the United Mine Workers of America
B. M. Overholt, Chairman, Knoxville (1955)
Cecil E. Newell, Chattanooga (1953)
J. S. Hall, Clinton (1954)

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Clyde Croswell, Chairman, Memphis
Robert M. Finks, Nashville
W. W. Potter, Knoxville
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L. W. Edwards, Nashville
J. B. Naive, M.D., Knoxville
W. C. Chaney, Memphis

Rural Health Committee
William N. Cook, Chairman, Columbia (1954)
Rae B. Gibson, Greeneville (1954)
James S. Hall, Clinton (1953)
Henry T. Kirby-Smith, Sewanee (1955)
Thurman Shipley, Cookeville, (1954)
T. G. Cranwell, Pikeville (1953)
James A. Loveless, Gallatin (1955)
Hunter Steadman, Henderson (1953)
John L. Armstrong, Somerville (1955)
J. T. Carter, Germantown (1954)

Grievance Committee
N. S. Shofner, Chairman, Nashville (1953)
Ralph Monger, Knoxville (1954)
Ernest G. Kelly, Memphis (1955)

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M. L. Trumbull, Chairman, Memphis
David K. Gotwald, Nashville
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C. C. Trabue IV, M.D., Nashville
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Third District—W. J. Sheridan, M.D., Chattanoaga (1954)
Fourth District—Myrtle Lee Smith, M.D., Livingston (1953)
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Sixth District—D. C. Seward, M.D., Nashville, Chairman (1953)
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Ninth District—J. Paul Baird, M.D., Dyersburg (1954)
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D. T. Chambers, Norma, Pres.
Milford Thompson, Oneida, Sec'y.
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Tipton County
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Williamson County
Louis Zeidberg, Franklin, Pres.
Adolphus Bray, Franklin, Sec'y.
Wilson County
Phillips Turner, Lebanon, Pres.
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1952 MEMBERS OF TENNESSEE STATE MEDICAL ASSOCIATION

The list of members of the Tennessee State Medical Association is published in compliance with a provision of the Constitution and By-Laws. The data are accurate as of December 10, 1952. They are arranged in the following order:

List of active members.

Counties arranged alphabetically.

Towns in each county arranged alphabetically and the members in each town arranged alphabetically.

List of members residing outside the state arranged alphabetically.

List of veteran members.

List of members who have died in the year 1952.

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A. W. Bishop
Olga Furth
J. S. Hall
Chas. E. Sappington
E. B. Smith

Lake City

J. M. Cox
R. B. Scott

Norris

S. G. McNeeley

Oak Ridge

(See Roane County)

BEDFORD COUNTY

Shelbyville

W. H. Avery
E. H. Barksdale
James N. Burch
W. L. Chambers
A. L. Cooper
Alfred Farrar
Taylor Farrar
Grace Moulder
Jack Nichols
T. R. Ray
Carl Rogers
Sara Womack

Wartrace

M. L. Connell

BENTON COUNTY

Camden

J. Mansfield Bailey
(Mbr. Humphreys Co.)
A. T. Hicks
*R. L. Horton

BLEDSOE COUNTY

Pikeville

Thomas G. Cranwell
(Mbr. Hamilton Co.)

BLOUNT COUNTY

Maryville

*Oliver K. Agee
K. A. Bryant
Geo. W. Burchfield
Henry A. Callaway
Lea Callaway
M. A. Carnes
W. C. Crowder
Lynn F. Curtis
W. N. Dawson
R. H. Haralson
H. L. Isbell
E. P. Kintner
Beulah Kittrell
Samuel S. Lambeth
Julian C. Lentz
C. B. Lequire
G. D. Lequire
L. R. Lingeman
T. S. Lovingood
J. M. McCulloch
J. F. Manning
James N. Proffitt
B. P. Ramsey
Trent Vandergriff
Lowell E. Vinsant

BRADLEY COUNTY

Cleveland

D. N. Arnold
Wesley A. Barton
(Mbr. Hamilton Co.)
W. B. Campbell
F. R. Ferguson
Wm. A. Garrott
C. S. Heron
J. C. Lowe
Joseph McCoin
C. T. Speck, Jr.
W. C. Stanbery
S. J. Sullivan
Claud H. Taylor
Madison S. Trewhitt

CAMPBELL COUNTY

Royal Blue

Chas. Rogers

Jellico

C. E. Ausmus
Robert L. Brown
Charles A. Prater
Ned C. Watts

La Follette

I. J. Baird
M. L. Davis
P. T. Howard
I. P. Lindsey
P. J. O'Brien
J. W. Presley
R. C. Pryse
James W. Riggs
L. J. Seargeant

CANNON COUNTY

Woodbury

William A. Bryant
(Mbr. Rutherford Co.)
Russell E. Meyers
(Mbr. Rutherford Co.)

CARROLL COUNTY

Bruceton

R. T. Keeton
L. E. Trevathan

Huntingdon

R. A. Douglas
L. B. Holladay
R. B. Wilson

McKenzie

E. F. Edwards
J. T. Holmes

Trezevant

F. C. Carnell

CARTER COUNTY

Elizabethton

Chas. B. Baughman
E. L. Caudill, Jr.
John A. Knapp
F. T. Pearson
J. S. Shaver
Homer P. Williams
J. M Willett

CHESTER COUNTY

Henderson

W. O. Baird
H. D. Farthing
Ernest P. Guy
O. M. McCallum
Hunter M. Steadman
J. B. Stephens

CLAIBORNE COUNTY

New Tazewell

H. C. Evans
(Mbr. Knox Co.)
George L. Rea
(Mbr. Knox Co.)

CLAY COUNTY

Celina

Champ E. Clark
(Mbr. Overton Co.)

COCKE COUNTY

Newport

W. E. McGaha
Drew A. Mims
L. S. Nease
(Mbr. Hamblen Co.)
W. C. Ruble, Jr.
Glen C. Shults
Fred M. Valentine

COFFEE COUNTY

Manchester

Howard A. Farrar
(Mbr. Rutherford Co.)
J. H. Farrar
(Mbr. Rutherford Co.)

Tullahoma

J. M. King
(Mbr. Bedford Co.)
Bryant S. Swindall
(Mbr. Bedford Co.)

CROCKETT COUNTY

Alamo

E. O. Prather, Jr.

Bells

E. Farrow
J. P. Hess
S. E. McDonald
R. W. Mayfield
William R. Sullivan

CUMBERLAND COUNTY

Crossville

Paul A. Erwin, Jr.
Wm. F. Evans
James L. Gardner
H. F. Lawson
Robert M. Metcalfe
Alfred Taylor

Pleasant Hill

Margaret Stewart
May C. Wharton

DAVIDSON COUNTY

Donelson

F. E. Anderson
Luther A. Beasley
C. N. Gessler
H. P. Hyder
Luther E. Smith

Goodlettsville

Roy R. Bowes

Madison

Frederic B. Cothren
George E. Horsley
Margaret Horsley
Naomi K. Pitman
Joe E. Sutherland
Harry Witztum

Madison College

Julian C. Gant
David F. Johnson
Gilbert H. Johnson
Cyrus F. Kendall
James D. Schuler

Nashville

*Walter M. Adair
Crawford Adams
J. W. Alford, Jr.
W. J. Alsobrook
Edwin B. Anderson
James P. Anderson
J. Sumpter Anderson
J. J. Ashby
G. F. Aycock
Sidney W. Ballard
Rudolph Batson
David S. Bayer
Eric Bell, Jr.
Lynch Bennett
Edmund W. Benz
W. C. Bilbro
Otto Billig
F. T. Billings, Jr.
Geo. I. Burkley, Jr.
Lindsay K. Bishop
James B. Boddie, Jr.
Anna M. Bowie
John M. Boylin
H. B. Brackin
*Henry B. Brackin, Jr.
Cloyce F. Bradley
G. Hearn Bradley
T. F. Bridges
M. I. Brown
(Mbr. Lincoln Co.)
J. Thomas Bryan
John C. Burch
Joseph G. Burd
R. N. Buchanan, Jr.
Roger B. Burrus
B. F. Byrd
B. F. Byrd, Jr.
Richard O. Cannon
George K. Carpenter
Oscar W. Carter
Randolph Cate
W. R. Cate
John S. Cayce
Lee F. Cayce
Amos Christie
Cully A. Cobb, Jr.
W. J. Core
Orrie A. Couch, Jr.
Sam C. Cowan
Sam C. Cowan, Jr.
Frederic E. Cowden
R. R. Crowe
Rollin A. Daniel, Jr.
Wm. T. Daniel
Philip V. Daugherty
T. W. Davis
Wm. A. Demonbreun
Walter L. Dively
Earl D. Dorris
Beverly Douglas
H. L. Douglass
Bate Dozier
Price Duff
R. S. Duke
George Duncan
Herbert Duncan
James W. Ellis
L. W. Edwards
Phillip C. Elliott
Harry M. Estes
Don L. Eyler
Sam J. Fentress
W. F. Fessey
R. O. Fessey
Robert M. Finks
Robert M. Foote
Garth E. Fort
S. Benjamin Fowler
Richard France
Herbert C. Francis
John W. Frazier, Jr.
Thomas Fern Frist
James L. Fuqua
Robert K. Galloway
Chas. K. Gardner
J. C. Gardner
Sam Y Garrett
(Mbr. Smith Co.)
R. S. Gass
(Mbr. Williamson Co.)
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Horace C. Gayden
John R. Glover, Sr.
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Robt. A. Goodwin
E. W. Goodpasture
David K. Gotwald
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John W. Griffith, Jr.
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Milton Grossman
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Chas. E. Haines
Thos. B. Haltom
C. M. Hamilton
Geo. H. Harding
Wm. Moore Hardy
E. F. Harrison
(Mbr. Williamson Co.)
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Fred R. Haselton
O. S. Hauk
James T. Hayes
J. H. Head, D.D.S.
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John G. Herzfeld
J. B. Hibbitts, Jr.
William Higginson
I. R. Hillard
R. H. Hirsch
J. Harvill Hite
A. N. Hollabaugh, Jr.
Chas. F. Hollabaugh
Wm. A. Horan
W. W. Hubbard
Granville W. Hudson
Vernon Hutton, Jr.
M. D. Ingram
J. McK. Ivie
D. J. Johns
Hollis E. Johnson
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Leon M. Lanier
Ralph M. Larsen
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Jere Lowe
J. P. Lowe
S. I. Lowenstein
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Philip L. Lyle
Robt. H. Magruder
Guy Milford Maness
J. Owsley Manier
W. R. Manlove
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W. D. Martin
Jas. Andrew Mayer
Ben R. Mayes
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C. C. McClure
C. C. McClure, Jr.
Robt. L. McCracken
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W. W. Wilson

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Decaturville

H. L. Conger

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Mary Baxter Cook
James Elliott (Mbr. Montgomery Co.)

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*W. A. Bell, Jr.
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Lawrence C. Jackson
W. M. Jackson

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Percy A. Conyers
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P. C. Tipton
Lydia V. Watson

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FRANKLIN COUNTY

Cowan

James Van Blaricum

Decherd

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Sewanee

Ruth Cameron
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George L. Smith

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Bradford

James H. Robertson

Dyer

W. W. Barnard
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Chas. W. Davis
A. H. Lick
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Medina

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Milan

H. P. Clemmer
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R. F. Hughes
F. L. Keil

Rutherford

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Trenton

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James W. Hall
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Rutledge

L. C. Bryan (Mbr. Knox Co.)

Washburn

Robt. J. Phlegar (Mbr. Knox Co.)

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T. E. Coolidge
R. S. Cowles, Sr.
Robt. S. Cowles, Jr.
N. H. Crews
T. F. Dyer
Luke L. Ellenburg
Haskell W. Fox
R. B. Gibson
J. G. Hawkins
Hal Henard
N. P. Horner
C. B. Laughlin
W. Lewis McGuffin
R. W. McMullen

Mosheim

Dale Brown

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Coalmont

L. L. Littell (Mbr. Wilson Co.)

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Morristown

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J. W. Davis
C. J. Duby
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J. W. Nabers
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John L. Pearce
R. A. Purvis
J. W. Richardson
Powell Trusler
D. J. Zimmermann

HAMILTON COUNTY

Chattanooga

Chester Adams
John W. Adams
Justin O. Adams
C. H. Alper
E. R. Anderson
J. J. Armstrong
T. L. Arnold
Merton Baker
C. H. Barnwell
H. B. Barnwell
S. H. Barrett
Earl Best, Jr.
W. R. Bishop
Robert J. Boehm
Walter F. Boehm
F. B. Bogart
J. W. Bradley
Frank S. Brannen
A. F. Branton
J. C. Brooks, Jr.
Sumner W. Brown
James Y. Bryson
Arch Bullard
E. F. Buchner, Jr.
W. R. Buttram
W. R. Buttram, Jr.
John R. Cain
Earl R. Campbell
F. E. Carrier
Douglas Chamberlain
Cleo Chastain
O. H. Clements
George E. Cox
Tolbert C. Crowell
Doyle E. Currey
J. Tom Currey
T. H. Curtis
O. M. Derryberry
J. M. DeLay
Robt. G. Demos
W. E. Denman
James F. Dietrich
Paul H. Dietrich
Richard B. Donaldson
Albert S. Easley
A. F. Ebert
A. H. Evans
Robt. E. Eyssen
J. R. Fancher
F. Marlin Fitts
Richard Van Fletcher
A. C. Ford
Guy M. Francis
J. E. Frazier
J. Marsh Frere
O. C. Gass
G. C. Gibson
Robt. H. Giles, Jr.
Dean W. Golley
Paul M. Golley
K. N. Gould
Frank Graham
F. Russell Hackney
Wm. R. Green
Alton G. Hair
R. J. Hall
J. L. Hamilton
Foster Hampton, Jr.
Frank F. Harris
E. M. Harrison
Carl A. Hartung
John B. Haskins
G. P. Haymore
Robt. S. Hellman
H. B. Henning
George K. Henshall
Homer D. Hickey
John M. Higgason
J. M. Higginbotham
J. F. Hobbs
John W. Hocker
J. McC. Hogshead
Pope B. Holiday, Jr.
C. M. Hooper
Rudolph A. Hoppe
Don R. Hornsby
O. G. Hughes
W. P. Hutcherson
D. Isbell
Thomas Jackson
Harry Jones
Edward G. Johnson
Franklin Johnson
Joseph Johnson, Jr.
J. T. Johnson
J. Paul Johnson
Melvin Johnson
D. B. Karr
Walter P. Keith
Joe B. Killebrew
John J. Killeffer
John E. Kimball, Jr.
Clyde R. Kirk
Gene H. Kistler
C. B. Landham
M. F. Langston
J. V. Lavecchia
H. P. Larimore
Chester L. Lassiter
Hiram A. Laws, Jr.
Stewart Lawwill
Phillip H. Livingston
H. D. Long
S. H. Long
Hugh B. Magill, Jr.
T. J. Manson
S. S. Marchbanks
Fred E. Marsh
M. A. Meacham
William MacGuire
H. J. McAlister
Cooper H. McCall
David McCallie
Augustus McCravey
J. B. McGee
J. D. L. McPheeters
George A. Mitchell
Jay B. Murphy
Oscar B. Murray
Marvin Nathan
Cecil E. Newell
F. T. Newell
F. T. Newell, Jr.
Julius G. Parker
A. M. Patterson
R. L. Patterson
J. White Patton
T. O. Pearson
J. B. Phillips
W. Houston Price
W. D. T. Record
F. F. Reisman, Jr.
Herman Renner
Gilbert M. Roberts
G. Madison Roberts
Robert C. Robertson
H. A. Schwartz
Clarence Shaw
George Shelton
W. J. Sheridan
John N. Shipp
V. F. Shull
Wm. G. Shull
Leopold Shumacker
George L. Sivils
Moore J. Smith, Jr.
Richard T. Stappenbeck
Harold J. Smith
Harold Starr
John B. Steele
Willard Steele
Willard H. Steele, Jr.
William A. Stem
Wm. G. Stephenson
J. E. Strickland, Jr.
Wesley Stoneburner
Charles L. Suggs, Jr.
Jack Tepper
Chas. Roberts Thomas
Paul C. Thompson
Robt. C. Thompson
A. S. Ulin
Louis Ulin
Minnie Vance
Gus J. Vlasis
Arthur J. Von Werrsowetz
Wm. E. Van Order
L. Spires Whitaker
G. Victor Williams
S. H. Wood
James C. Wright
Roy O. Young

Daisy

C. A. Clements

Hixon

H. Cockerham

HANCOCK COUNTY

HARDEMAN COUNTY

Bolivar

F. L. Baker
D. L. Brint
Robert A. Koch
W. E. Lawrence
B. T. McAnulty
J. Knox Tate

Grand Junction

L. D. Pope

Whiteville

P. M. Bishop
Aubrey Richards

HARDIN COUNTY

Savannah

H. D. Blankenship, Jr.
J. W. Carroll
O. C. Doty
J. V. Hughes, Jr.
Otis Whitlow

HAWKINS COUNTY

Bulls Gap

J. F. Kite, Jr. (Mbr. Greene Co.)

Church Hill

Warren L. Clark (Mbr. Sullivan-Johnson Cos.)

HAYWOOD COUNTY

Brownsville

T. C. Chapman
H. L. Gilliand
W. D. Poston
Glenn T. Scott
David E. Stewart
John Thornton, Jr.
J. K. Welch, Jr.

HENDERSON COUNTY

Lexington

R. M. Conger
C. J. Huntsman
W. C. Ramer

HENRY COUNTY

Paris

Arthur Dunlap
R. Graham Fish
T. H. Jones
Geo. R. McSwain
J. H. McSwain
John E. Neumann
E. B. Paschall
W. G. Rhea
J. Roy Smith
Henriette Veltman
C. D. Wilder

HICKMAN COUNTY

Centerville

Parker D. Elrod (Mbr. Davidson Co.)
Ogle Jones (Mbr. Davidson Co.)

HOUSTON COUNTY

Erin

O. H. Atkins (Mbr. Montgomery Co.)
Troy Walker (Mbr. Montgomery Co.)

HUMPHREYS COUNTY

Johnsonville

Henry M. Cox (Mbr. Consolidated Co.)

Waverly

James T. Allen
H. C. Capps
J. C. Armstrong

JACKSON COUNTY

Gainesboro

L. R. Anderson
W. T. Anderson
L. R. Dudney
R. C. Gaw

JEFFERSON COUNTY

Dandridge

C. M. Easley (Mbr. Hamblen Co.)
Sam D. Sullenberger (Mbr. Hamblen Co.)

Jefferson City

Earl R. Beets (Mbr. Hamblen Co.)
T. A. Caldwell (Mbr. Knox Co.)
Sam C. Fain (Mbr. Hamblen Co.)
Frank Milligan (Mbr. Hamblen Co.)
Estle P. Muncy (Mbr. Hamblen Co.)

Strawberry Plains

Robert Creech (Mbr. Knox Co.)
R. M. Webster (Mbr. Knox Co.)

White Pine

Dale Allen (Mbr. Hamblen Co.)
E. R. Baker (Mbr. Hamblen Co.)

JOHNSON COUNTY

Mountain City

Paul J. Bundy
R. O. Glenn

KNOX COUNTY

Concord

Malcolm Cobb
B. D. Goodge

Corryton

M. L. Jenkins
A. D. Simmons

Fountain City

James P. Harmon
A. L. Jenkins
F. H. Payne
Joe L. Raulston
J. Gordon Smith

Knoxville

Eugene Abercrombie
Alton Absher
J. E. Acker, Jr.
Robert L. Akin
Eben Alexander
Chas. Armstrong
John W. Avera
Troy P. Bagwell
B. G. Baker
Robert M. Baker
O. E. Ballou
Lloyd N. Bankston (Mbr. Giles Co.)
Spencer Y. Bell
Chas. W. Black
Wade H. Boswell
H. O. Boukard
M. C. Bowman
Robert Brashear
Robert Brimi
Horace E. Brown
*Richard Butler
John Burkhart
P. H. Cardwell
C. S. Carlson
Wm. W. Carter
L. G. Caylor
Donald Chamberlain
Jack Chesney
L. Warren Chesney
H. S. Christian

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*Military service

H. F. Christenberry
H. E. Christenberry, Jr.
K. W. Christenberry
W. F. Christenberry
C. L. Chumley
William E. Clark
Edward S. Clayton
Margherita C. Cook
Sam Cooper
William R. Cross
Miles S. Crowder
J. P. Cullum
H. K. Cunningham
Daniel Davis
Martin Davis
R. V. Depue
W. A. DeSautelle
W. T. DeSautelle
A. W. Diddle
Sheldom Domm
Earl Donathan
W. F. Dorsey
John Daugherty
Fred F. Dupree
Chas. R. Earnest, Jr.
J. Gilbert Eblen
E. M. Edington
Edward W. Ellis
J. B. Ely
W. H. Enneis
Frank Faulkner
George H. Finer
C. F. George
(Mbr. Hamblen Co.)
Vivian Gibbs
W. D. Gibson
Edgar L. Grubb
Glenn Grubb
E. A. Guynes
John H. Hall
J. R. Hamilton
B. I. Harrison
Eugene Haun
Louis A. Haun
M. L. Hefley
Claire E. Heitman
George G. Henson
Zelma L. Herndon
Howard Hicks
Hubert C. Hill
Jesse C. Hill
John R. Hill
Oliver W. Hill, Jr.
Victor Hill
David F. Hoey
Leon C. Hoskins
George Turner Howard, Jr.
Moses Howard
A. G. Huffstedler
Fred F. Hufstedler
Perry Huggin
E. C. Idol
Geo. Inge
C. E. Irwin
W. J. Irwin
Harry H. Jenkins
William S. Jones
John O. Kennedy
John F. Kesterson
R. C. Kimbrough, Jr.
H. L. Kitts
Lamar Knight
A. Hobart Lancaster
F. K. Lawson
Robert P. Layman
Robert S. Leach
Rene Ledbetter
John H. Lesher
W. J. Lehman
Forest S. LeTellier
Felix Line
Geo. S. Mahan
Joseph T. Marshall
*C. P. McCammon
Margaret Maynard
Roy McCrary
A. R. McCullough
M. D. McCullough
Roy L. McDonald
P. A. McGinnis
Richard McIlwaine
R. L. McReynolds
Alfred F. Miller
Edwin E. Miller
Foy B. Mitchell
John F. Mohr
Ralph H. Monger
J. L. Montgomery
John D. Moore
Owen Moore
Joel C. Morris
J. F. Morrow
William S. Muse
J. B. Naive
J. B. Neil
Carl A. Nelson, Jr.
William A. Nelson
H. L. Neuenschwander
Robert Newman
Eugene P. Nicely
Hazel Nichols
Ralph Nichols
Kenneth A. O'Connor
Homer Ogie
B. M. Overholt
Nicholas Pappas
Robert F. Patterson
Robert F. Patterson, Jr.
Herschel Penn
Jarrell Penn
H. Dewey Peters
B. F. Peterson
Cecil E. Pitard
S. Joe Platt
Herbert L. Pope
W. W. Potter
William F. Powell
Bruce Powers
John C. Pryse
(Mbr. Anderson-Campbell Co.)
James C. Prose
J. B. Purkall, Jr.
John A. Range
W. D. Richards
N. G. Riggins
James Roberts
Frank Rogers
Kenneth Rule
Richard C. Sexton
J. H. Saffold
Wm. A. Shelton
A. B. Shipley
F. Chas. Sienknecht
Frank J. Slemons
Chas. C. Smeltzer
Joe T. Smith
Philip Smith
Vernon I. Smith
W. E. Smith
John R. Smoot
J. M. Stockman
Thos. Stevens
Wm. K. Swann, Jr.
R. G. Tappan
George W. Tharp
D. R. Thomas
Philip Thomas
Wm. M. Tipton
Geo. M. Trotter
M. Frank Turney
C. L. Walton
R. G. Waterhouse
David Waterman
Alvin J. Weber, Jr.
Fred West
Joel J. White
W. L. Whitehurst
Richter H. Wiggall
G. A. Williamson, Jr.
Leon J. Willien
J. D. Winebrenner
R. B. Wood
R. M. Young
Vincent T. Young
E. Russell Zemp
Charles R. Zirkle
George Zirkle

Mascot

H J. Folin
Joseph K. Scale, Jr.

Powell Station

L. F. Cruze

LAKE COUNTY

Ridgely

W. B. Acree

Tiptonville

J. R. Holefield
W. T. Rainey
F. B. Smythe

LAUDERDALE COUNTY

Halls

J. G. Olds
(Mbr. Dyer, Lake & Crockett)

Ripley

J. L. Dunavant
J. R. Lewis
Olyn Fred Moore, Jr.
Landrum S. Tucker
C. R. Webb
Claud M. Williams

LAWRENCE COUNTY

Lawrenceburg

V. H. Crowder
J. W. Danley
W. O. Crowder
Leo C. Harris, Sr.
L. B. Mollov
T. J. Stockard

Loretto

V. L. Parrish
M. H. Weathers, Jr.

LEWIS COUNTY

Hohenwald

William E. Boyce
(Mbr. Maury Co.)
Jerome Powers
(Mbr. Consolidated Co.)

LINCOLN COUNTY

Elora

A. L. Griffith

Fayetteville

Ben H. Marshall
R. E. McCown
J. V. McRady
T. A. Patrick

Petersburg

W. S. Joplin

LOUDON COUNTY

Lenoir City

Harold D. Freedman
(Mbr. Knox Co.)
Hughes Johnson
(Mbr. Knox Co.)
J. A. Leeper
(Mbr. Knox Co.)
R. V. Taylor
(Mbr. Knox Co.)

Loudon

Corrie Blair
(Mbr. Knox Co.)
Arthur P. Harrison
(Mbr. Knox Co.
W. B. Harrison
(Mbr. Knox Co.)
Wm. T. McPeake
(Mbr. Knox Co.)
J. R. Watkins
(Mbr. Knox Co.

MACON COUNTY

Lafayette

E. M. Froedge
Max F. Painter
John R. Smith

MADISON COUNTY

Bemis

I. A. Langdon
Kelly Smythe

Jackson

J. G. Anderson
Thomas K. Ballard
G. H. Berryhill
Wm. H. Brooks
Cecil Brown
Swan Burrus
Swan Burrus, Jr.
Hughes Chandler
Tate B. Collins
Wm. G. Crook
G. B. Dodson
J. E. Douglass
Roy A. Douglass, Jr
W. T. Fitts
Robt. L. Gilliam
Oliver Graves
W. W. Harrison
Henry H. Herron
S. M. Herron
J. T. Holmes
G. B. Hubbard
Helen Johnston
Leland M. Johnston
G. Frank Jones
Harold T. McIvers
Frank A. Moore
H. N. Moore
Wm. C. Moore
Lamb B. Myhr
R. M. Neudecker
John B. Nuckolls
J. C. Pearce
J. E. Powers
John G. Riddler
Norris Shelton
Charles C. Stauffer
J. R. Thompson, Jr.
Barbara Truex
S. Allen Truex
William F. Wagner
Charles F. Webb
Charles H. Webb
R. B. White
George B. Wyatt
Paul E. Wylie

MARION COUNTY

South Pittsburg

J. B. Havron
(Mbr. Hamilton Co.)
Viston Taylor
(Mbr. Hamilton Co.)

MARSHALL COUNTY

Belfast

H. A. Morgan, Jr.
(Mbr. Bedford Co.)

Lewisburg

Kenneth Brown
(Mbr. Bedford Co.)
J. T. Gordon
(Mbr. Bedford Co.)
K. J. Phelps
(Mbr. Bedford Co.)
William S. Porch
(Mbr. Bedford Co.)

MAURY COUNTY

Columbia

D. B. Andrews
Wendell C. Bennett
H. C. Busby
Mildred Casey
William N. Cook
C. C. Gardner
Harry C. Helm
Robin Lyles
Clay R. Miller
James B. Miller
Edwin K. Provost
Warren Rucker
Leon S. Ward
Eleanor Williamson
Watt Yeiser
Thomas K. Young

Mt. Pleasant

G. C. English
J. H. Jones
C. D. Walton

McMINN COUNTY

Athens

W. R. Arrants
Helen R. Arterburn
Charles T. Carroll
R. W. Epperson
C. O. Foree
W. Edwin Foree
J. A. Powell, Jr.
Edward B. Ranck
L. H. Shields

Etowah

Thomas C. Beaman
S. Boyd McClary, Jr.
John C. Sharp
H. P. Whittle

McNAIRY COUNTY

Selmer

T. N. Humphrey
W. A. Phillips
Montie E. Smith

MONROE COUNTY

Madisonville

R. C. Kimbrough
Horace M. McGuire

Sweetwater

J. H. Barnes
W. J. Cameron
D. F. Heuer, Jr.
T. A. Lowry
J. E. Young

MONTGOMERY COUNTY

Clarksville

Edward R. Atkinson
Carlos B. Brewer
E. P. Cutter
Sam M. Doane, Jr.
H. H. Edmonson
V. H. Griffin
B. T. Iglehart
J. H. Ledbetter, Sr.
J. H. Ledbetter, Jr.
William G. Lyle
J. F. Malone
Jack Ross
Bryce Runyon
A. F. Russell
M. L. Shelby
Charles Trahern
Paul E. Wilson
R. M. Workman

MOORE COUNTY

Lynchburg

F. Harlan Booher
(Mbr. Lincoln Co.)

MORGAN COUNTY

Oakdale

J. H. Carr
(Mbr. Roane Co.)

OBION COUNTY

Kenton

Alden H. Gray
(Mbr. Consolidated Cos.)

Obion

Leon I. Runyon
James C. Walker

Troy

E. A. Boswell
W. E. James

Union City

J. Kelly Avery
M. A. Blanton, Jr.
Stevens Byars
H. W. Calhoun
Wm. N. Carpenter
Robt. M. Darnall
B. O. Garner
R. G. Latimer, Jr.
R. G. Latimer, Sr.
James W. Polk
Malcolm T. Tipton

OVERTON COUNTY

Livingston

J. D. Capps
H. B. Nevans
Denton Norris
A. B. Qualls
F. L. Sidwell
Myrtle L. Smith

PERRY COUNTY

Linden

O. A. Kirk

Lobelville

E. W. McPherson
(Mbr. Davidson Co.)

PICKETT COUNTY

Byrdstown

Malcolm E. Clark
(Mbr. Overton Co.)

POLK COUNTY

Benton

John Lillard
(Mbr. McMinn Co.)

Copperhill

A. R. Evans
Mbr. Hamilton Co.)
W. Y. Gilliam
(Mbr. Hamilton Co.)
H. H. Hyatt
(Mbr. Hamilton Co.)

Ducktown

A. J. Guinn
(Mbr. Hamilton Co.)

PUTNAM COUNTY

Algood

J. T. Moore
J. T. Moore, Jr.

Cookeville

J. T. Deberry
Lex Dyer
Kenneth L. Haile
Wm. A. Hensley, Jr.
W. A. Howard
R. H. Millis
Thurman Shipley
J. Fred Terry

Granville

L. M. Freeman

Monterey

C. A. Collins
T. M. Crain

RHEA COUNTY

Dayton

Albert Broyles
(Mbr. Hamilton Co.)
J. J. Rogers
(Mbr. Hamilton Co.)

Spring City

Max D. Lindsay
(Mbr. Hamilton Co.)

ROANE COUNTY

Harriman

Thomas L. Bowman
H. Stratton Jones
L. A. Killefler
John R. Sisk

Kingston

Nat Sugarman

Oak Ridge

(See Anderson Co.)
Gould A. Andrews
R. R. Bigelow
Marshall Brucer
M. C. Ciaramelli
Betty Cooper
Martin Costello
John P. Crews
Dexter Davis
John DePersio
J. L. Diamond
P. M. Dings
Jean S. Felton
William P. Hardy
William Holden
R. A. Johnson
Herbert Kerman
Ralph M. Kinseley
Joseph A. Lyon
Dana Nance
Lewis Preston
William Pugh
Charles J. Ragan
Julian Ragan
T. L. Ray
Hyman Rossman
Henry B. Ruley
Paul E. Spray
Charles R. Sullivan
Welby N. Tauxe
Dan Thomas
R. G. Tromley
Arthur Upton
A. N. Ward

Oliver Springs

S. J. Van Hook
Fred O. Stone
(Mbr. Anderson-Campbell Co.)

Rockwood

Robert S. Hicks
G. E. Wilson

ROBERTSON COUNTY

Springfield

W. B. Dye
John S. Freeman

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*Military service

J. S. Hawkins
J. M. Jackson
A. R. Kempf
W. P. Stone
J. F. Wilkison

RUTHERFORD COUNTY

Murfreesboro

Carl F. Adams
W. Stanley Barham
J. B. Black
J. I. Boykin
John E. Carlton
John T. Cason
B. S. Davison
S. C. Garrison, Jr.
Gilbert Gordon
Sam T. Hay
R. D. Hollowell
A. J. Jamison
J. K. Kaufman
Lois M. Kennedy
M. B. Murfree, Jr.
Eugene Odom
B. W. Rawlins
J. A. Scott
Wm. W. Shacklett
Bart N. White
Sam T. Wiles

Smyrna

George Goodall
James Lee Moore
Robert Wooldridge

SCOTT COUNTY

Norma

D. T. Chambers

Oneida

M. F. Frazier
H. M. Leeds
M. E. Thompson
Milford Thompson

SEVIER COUNTY

Gatlinburg

Ralph H. Shilling
Bruce H. Sisler
George Wilhelm

Sevierville

Troy J. Beeler
R. A. Broady
R. A. McCall
Robert F. Thomas
C. P. Wilson
O. H. Yarberry

SHELBY COUNTY

Collierville

T. P. Pearce
R. F. Kelsey

Cordova

C. A. Chaffee
W. E. Boyd

Forest Hill

J. E. Clark

Germantown

John T. Carter, Jr.

Memphis

Shields Abernathy
Robert F. Ackerman
T. H. Adams
W. M. Adams
Justin H. Adler
James E. Alexander
G. D. Allen
C. D. Allen, Jr.
T. Pearson Allen
Frank S. Allen
Robert S. Allen
T. H. Alley
Jacob Alperin
S. B. Anderson
William E. Andrews
D. H. Anthony
Blake Arnoult
J. M. Aste
H. E. Atherton
Edgar L. Austin
W. W. Aycock
J. C. Ayres, Jr.
C. O. Bailey
John W. Baird
J. Earl Baker
Malcolm E. Baker
A. T. Ball
G. H. Bassett
Paul J. Batson, Jr.
Lawrence N. Bellew
Charles A. Bender
J. M. Bethea
Ralph C. Bethea
James D. Biles, Jr.
W. T. Black, Jr.
Sam Blackwell
Basil A. Bland, Jr.
Breen Bland
C. D. Blassingame
Phil Bleecker
Robert E. Bonner
Howard A. Boone
Whitman Borg
R. L. Bourland
R. L. Bowlin
Earl P. Bowerman
H. B. Boyd
Winston Braun
R. R. Braund
James T. Bridges
Carey Bringle
D. A. Broady
J. M. Brockman
J. H. Bronstein
Harry G. Bryan
Samuel Bryan
K. M. Buck
J. A. Buchignani
W. D. Burkhalter
Geo. H. Burkle, Jr.
M. K. Callison
E. Guy Campbell
Ernest A. Canada
Dominic J. Cara, Jr.
B. W. Cannon
Robert S. Caradine
D. M. Carr
David S. Carroll
Dan Carruthers, Jr.
Harvey W. Carter
T. T. Carter
A. H. Chamberlain, Jr.
J. M. Chambers, Jr.
W. C. Chaney
R. F. Ching
Joseph M. Chisholm
Charles L. Clark
E. W. Cocke
(Mbr. Rutherford Co.)
E. W. Cocke, Jr.
Lawrence L. Cohen
M. D. Cohen
Max H. Cohen
W. C. Colbert
E. H. Cole
B. G. Collins
James H. Collins
Frank H. Collins
E. D. Connell
John P. Conway
George A. Coors
Giles A. Coors
Arthur A. Cox
Erwin M. Cox
John F. Cox
P. T. Crawford
A. H. Crenshaw
J. A. Crisler, Jr.
C. V. Croswell
J. A. Danciger
Orin L. Davidson
J. M. Davis
Charles J. Deere
A. Oliver Delozier
(Mbr. Anderson-Campbell)
V. J. Demarco
McCarthy DeMere
Richard DeSaussure
Alice R. Deutsch
J. L. Dies
L. W. Diggs
W. T. Dinsmore
J. M. Dorris
Thomas G. Dorrity
J. J. Douglas
Paul T. Drenning
Horton DuBard
W. D. Dunavant
T. G. Duncan
Elmer S. Eddins
Howard Ellzey
Cyrus C. Erickson
James N. Etteldorf
C. B. Etter
T. D. Evans
M. T. Evans
Sidney S. Evans
H. B. Everett
Harold Feinstein
Daniel F. Fisher
J. C. Flaniken
R. B. Flaniken
J. H. Francis
W. Edward French
Eugene W. Gadberry
T. A. Gardner, Jr.
Dan C. Gary
Elsbeth Gehorsam
G. F. Gilliespie
George E. Gish
C. H. Glover
Fred A. Goldberg
Ralph Goldman
Lester I. Goldsmith
D. W. Goltman
J. S. Goltman
J. O. Gordon
H. B. Gotten
Nicholas Gotten
W. H. Gragg
W. H. Gragg, Jr.
T. M. Graves
W. R. Graves
H. D. Gray
Arthur W. Green
C. R. Green
Jack Greenfield
A. J. Grobmyer, Jr.
N. W. Guthrie
James S. Haimsohn
E. R. Hall
V. A. Hall
J. F. Hamilton
E. C. Ham
B. T. Hardin
James D. Hardy
J. H. Harris
Charles W. Harting
Mallory Harwell
C. D. Hawkes
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Diplomate, American Board of Psychiatry and Neurology, Inc., Medical Director

From the Executive Secretary

ORGANIZATIONAL NEWS

epaid surance ommittee eets

The full Prepaid Insurance Committee of the Association held a called meeting in Nashville on Sunday, January 6th. Present were:

Dr. N. S. Shofner, Nashville
Dr. Daugh W. Smith, Nashville
Dr. R. H. Kampmeier, Nashville
Dr. W. C. Chaney, Memphis
Dr. Joseph Johnson, Jr., Chatta.
Dr. R. B. Wood, Knoxville
Mr. John T. O'Connor, Knoxville
Mr. Charles L. Cornelius, Nashville
Mr. Emerson Mitchell, Chattanooga
Mr. V. O. Foster, Nashville

Significant actions taken during the three-hour session were as follows:

entists ant in ennessee lan

Heard committee of dentists, Drs. George Seeman, C. F. Landis, and Ewing Connell request modification of Tennessee Plan provisions to permit payment of Plan benefits to dentists for certain procedures.

tudy ommittee ppointed

A special study committee composed of Dr. Joe Johnson, Dr. Ed Newell, Jr., and Mr. Emerson Mitchell was appointed to explore the proposal further with a special liaison study committee to be appointed by the State Dental Association and to report their findings to the full Committee.

evised Fee chedule dopted

Change ver" eriod equired

Adopted a revised fee schedule as submitted by Ex. Sub-Committee after several months' study and consultation with representatives of all specialty groups. The new schedule will go into all new policies after actuarial study, minor revision for actuarial or administrative purposes, and after underwriters have sufficient time for the "change over." Physicians will honor all presently outstanding contracts on present fee schedule until they have been replaced eventually by new schedule. Change-over will require minimum of one year after starting date. Revised schedule is $200.00 maximum and is an over-all increase of present schedule of about 12 percent. (Subject to recent WSB ruling.)

amily ncome efinition nchanged

Ruled that "family income" will continue to mean the total income of members of an insured family. Had two Plans, "A" and "B" been established, the term would have had to be re-defined as the income of the principal wage earner for administrative purposes.

ledical enefits in ospital elayed

Heard report of special committee on medical care benefits in hospitals recommending $10.00 for first visit, $4.00 succeeding visits on a service basis. Since the recommendation exceeds allowable amounts under recent ruling of Wage Stabilization Board, action was held in abeyance and committee retained.

ocal ocieties to tudy Uping ncome Limits

Instructed the Executive Secretary to communicate with all local societies requesting that they review the new increased fee schedule and consider the desirability of the House raising the family income limit from $3,600.00 to $4,200.00 in April. The increase in income limit is deemed necessary to compensate the public for the higher fees, the increased cost of living, and the declining "take home pay" occasioned by higher income taxes. Societies will be requested to express their opinion of the higher income limit through their delegates to the annual meeting.

Chairman of Committee Resigns

Accepted resignation of Mr. Maclin Davis, Nashville, who observed that the Plan is now established and expressed appreciation for the honor and opportunity of serving on the Committee. Mr. Davis has been Chairman since the Committee's inception and has made valuable contributions as one of the public members. The Trustees will name his successor at an early date.

NEED A HOTEL RESERVATION FOR THE STATE MEETING?

Don't stay at home because you haven't a hotel room for the T.S.M.A. Convention. Dr. Ralph Monger and his Hotel Committee will get you a room.
Write to Dr. Monger, NOT TO A HOTEL....if you need a room. Use form below.

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Schedule of Events:

Monday—House of Delegates and Specialty Sections

Monday Night—Specialty dinners

Tuesday—Scientific sessions begin

Tuesday Night—President's Night

Wednesday—House of Delegates and Scientific Sessions continued

Wednesday Night—FUN NIGHT
Dean Hills Country Club

Clip and mail the coupon below to Dr. Ralph H. Monger, Chairman, Hotel Reservation Committee, Medical Arts Building, Knoxville, Tennessee

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Dr. Monger:

Please reserve the following accommodations during the period of the Annual Meeting of the Tennessee State Medical Association in Knoxville, April 7-8-9, or such other days specified.

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☐ Suite

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p.m.

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Name..........................

Address.......................

Public Service

THE TENNESSEE TEN

The American Medical Association's efficient Washington office has issued a legislative report of importance to all physicians and we present herewith an abstract of that report.

The Committee on Legislation met in Los Angeles, California, on December 4, 1951, during the Clinical Session of the Association and took action on recently introduced federal legislation. The Board of Trustees approved the following recommendations of the Committee:

S.1848, Frear, War Disaster Act of 1951. Opposed on the recommendation of the Council on National Emergency Medical Service because of: (1) Lack of unanimity of agreement between federal agencies as to the purpose and mechanism of this measure; (2) the lack of any urgency for legislation at this time to implement the type of program proposed by the bill; and (3) the huge cost of the program and the fact that its enactment would necessitate the establishment of one or more new federal agencies.

S.1875, Humphrey, Federal aid to cooperative and nonprofit health insurance companies. Opposed, upon the recommendation of the Council on Medical Service. Bill is incompatible with the sound philosophies concerning the rendition, distribution and financing of medical care enunciated by the A.M.A.

S.2171, Hill and Aiken, Voluntary Health Insurance. Opposed on the recommendation of the Council on Medical Service for the same reason given in opposing S.1875.

S.2247, Lehman, Federal assistance for establishing diagnostic clinics for early detection of diseases and providing home care services. Opposed. Bill referred to the Council on Medical Service for study and report.

S.2325, Humphrey, Industrial Safety. Opposed for the reason that no need has been demonstrated and problems of this character can be solved at the state level without federal assistance.

H.R.4405, Clemente, Permitting deductions from gross income for medical expenses. Approved.

H.R.4549, Clemente, Hospital for juvenile drug addicts. The following statement was agreed to: "That the A.M.A. fully appreciates the problem that the juvenile addict presents; that this is a problem of a few of the very large metropolitan areas and that wherever possible it should be taken care of on a local basis; where this cannot be done, the present existing facilities should be used (Fort Worth, Texas, and Lexington, Kentucky); when this can no longer be done, then the A.M.A. would advise expansion of the present facilities."

January 3, 1952.

Mr. Ed L. Bridges
Tennessee State Medical Association
510 Doctors Building
Nashville 3, Tennessee

Dear Mr. Bridges:

I want to tell you that I have heard many complimentary remarks about the course you conducted for the doctors' assistants here in Knoxville. Several girls who did not enroll are now sorry since they have heard how much we learned and the pleasant association we had with girls in the same line of work whom we had never seen. We were so happily surprised at becoming graduates and receiving our diplomas, as we call them. I am awfully proud of mine and quite a few of us are having our names engraved on them and plan to have them framed and hung in our offices alongside our doctors' diplomas. We may not get by with this but we are going to attempt it. I must mention the wonderful dinners and the lovely table decorations the doctors provided for us too.

I thank you personally for making this course available to us and all with whom I have talked were well pleased and expressed the hope that the Public Relations Training Course for Doctors' Assistants would become an annual affair.

With best wishes to you and yours for a happy and prosperous 1952.

Sincerely,
Ann Stradley,
President, Medical Assistants Association
Knoxville, Tennessee

From the Executive Secretary

ORGANIZATIONAL NEWS

Annual Meeting Highlights

Doctor—have you marked your calendar for the best Annual Meeting ever? If not, put a ring around the dates April 7, 8, 9 and clip and mail the hotel reservation coupon on the next page now!

Headquarters —Andrew Johnson Hotel, Knoxville

Headquarters will be the Andrew Johnson Hotel, Knoxville. Other convenient hotels are listed on next page. The host society, the Knoxville Academy of Medicine, has not spared either effort or funds to make your visit pleasant and profitable. This meeting is planned around the triple theme of BUSINESS, EDUCATION, AND FUN. They'll make a good cake if you supply the leavening of attendance.

Policy-Making Body Meets

The House of Delegates will meet Monday and Wednesday in the Auditorium of the Knoxville Academy Building (two blocks from hotel). The House is composed of the Officers, Trustees, Councilors, Past-Presidents and elected delegates from local societies totaling 123 seats.

Top Flight Scientific Sessions

The scientific sessions will be held Tuesday and Wednesday in the Ballroom of the Andrew Johnson. Two symposia and more than a dozen papers on a variety of subjects will be presented. Detailed program will be mailed you soon. More than forty selected technical, scientific and educational exhibits will augment the scientific lectures.

Honoring Our President

Tuesday night is President's Night. Honoring President E. G. Kelly, this program is one of the highlights of the meeeting. It will feature addresses by the President's guest and the President-Elect, Dr. D. W. Smith; a musical interlude by an all-physician orchestra; the presentation of the winner of the Essay Contest and the winner of the Outstanding General Practitioner Award. Doctors, wives, distinguished guests and friends will attend. Time, 8:00 P.M.—Place, Ballroom of the Andrew Johnson.

Don't Miss This!

Then comes FUN NIGHT (Wednesday). The Knoxville Academy has a real treat for doctors, wives and guests who will be whisked from the front of the Andrew Johnson at 5:00 p.m. in cars operated by the Knoxville Academy Auxiliary to the beautiful Dean Hills Country Club. Look for sign on cars "Hop In, Doctor." In store for you there will be cocktails, an out-of-this-world dinner, a professional dance orchestra, a professional floor show—all well spiced with special awards and repartee by Dr. E. R. Zemp, Master of Ceremonies. It's all FUN—not a serious speech or moment! From 6:30 p.m. 'til————?

Concurrent Meetings

Watch for Official Program

Other groups meeting concurrently with the Association are the Tennessee Academy of General Practice, the Tennessee Academy of Ophthalmology, the Public Health Council, Organizational meeting of Tennessee Chapter of American College of Surgeons, the Tennessee Diabetes Association, the Postgraduate Committee, the Tennessee Radiological Society and others to be announced. A detailed program will be mailed you shortly.

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3rd

4th

Public Service

THE TENNESSEE TEN

(Guest Editor of this section of the Journal is Dr. W. C. Chaney of Memphis, delegate to the AMA's recent convention at Los Angeles. Dr. Chaney gives a penetrating analysis of the two-day Public Relations Conference preceding the main convention.—Ed Bridges.)

"A horse can't pull while kicking,
This fact I merely mention;
Neither can he kick while pulling,
Which is my main contention."

That quotation serves to underline the general theme of the PR Conference, which was "Joining Forces for Better PR."

Most Effective Conference Yet

The Conference was the most effective one I have ever attended. It got down to cases and dealt with PR problems we face every day, in the office, in the hospital, in public, and in the patient's home.

There were 22 speakers and their talks were divided into four general subjects:

1. What the people think.
2. PR Problem Number 1 is the Cost of Sickness.
3. Joining Forces with Other Groups.
4. Where Do We Go from Here?

All through this meeting I had a guilty feeling that Tennessee has fallen behind many of the other states in taking a positive stand, an aggressive stand, in letting the people know that we mean to win the fight against Socialized Medicine and preserve for them the kind of medical care we know is best for them. As one of the speakers put it: "Joe Doakes really wants to fight shoulder to shoulder with his doctor, in stamping out all government efforts toward Socialism."

May I emphasize some outstanding suggestions emanating from the Los Angeles Conference?

Some Significant Results of Poll

To get some idea of what the people think, a door-to-door campaign was carried on in Decatur, Ill., population 66,000. Here are some of the poll results.

91 percent had a family doctor.
75 percent consulted specialists.
29 percent said surgical fees were too high.
43 percent said hospital bills were too high.
44 percent said drugs cost too much.
82 percent felt kindly toward the A.M.A.

29 percent complained about their doctors. They said the doctors should be less egotistical, less serious, less cold and devote more time to the patient. In other words, in a city of 66,000, a total of 19,000 persons didn't think we were "so hot."

As one speaker expressed it: "See that in getting money you don't lose the things that money can't buy." Another physician suggested we should explain to the patient the reason for all his bills. He told of a man who had a hemorrhoid operation, and who complained that he had to pay the pathologist's fee to find out that what the surgeon removed was hemorrhoids. They could have explained to the patient that the pathologist was checking for malignancy.

I was particularly interested in a noble experiment carried out by some 500 physicians in Santa Clara County, California. They had been harassed constantly by newspapers. Editorials appeared almost daily saying that because of the high cost of medical care, more and more people were finding it impossible to get the medical attention they needed. The Santa Clara doctors hit upon a very unique plan which they called their "Regardless of the Ability to Pay" idea. All of the 500 physicians agreed that they would take as many patients as the Society Secretary's office referred to them. Then a large ad was inserted in newspapers which read:

"Wanted: The names and addresses of all the people of Santa Clara County who need medical care but who are unable to pay the cost of a thorough medical examination." These people were urged to call a certain telephone number. This number was that of the Society Secretary. Those who would call were promised amost thorough and skillful examination free of all cost. Several thousand calls were expected, but after one week, there were only 49.

Bad PR Reversed by Realism

When the people of Santa Clara and the newspapers heard the result of this effort of the Medical profession to look after the poor, the papers became friendly and could not say enough nice things about the doctors. This was certainly Public Relations at its best!

The value of the grievance committee was thoroughly discussed in such a way as to broaden our ideas of its value.

We should not only sell ourselves to the people, but also our good will, and the voluntary way of life. If Public Relations is to work in a Medical Society, we must remember that rhyme at the beginning of this section—a pulling horse can't kick, and a kicking horse can't pull.

A psychologist who studied medical care made these observations at the Conference:

"Much of the critical attitude of the public is due to a deep, underlying resentment and conviction that the modern doctor is out of tune with the times." (He suggested more participation in public affairs.)

"The doctor should state individually and publicly his realistic idealism. He must be made to feel right about charging a fee. Medical fees must be set on a valid businesslike basis.

"Hidden resentment against the doctor should be attacked courageously.

"The reasonable desire of both doctor and patient for appreciation and affection should be satisfied.

"The doctor should recognize that the world is changing and that his medical practice is part of this world."

Collections and Public Relations

An Executive Secretary who set up a collection bureau for a large county society recommended that such societies "become more alert to the economic aspects of medical practice, and that they explore the possibility of solving, by group action, some of the business problems that are vitally related to the preservation of good public relations, particularly in the area of collections."

Another Executive Secretary thus defined PR:

"People think of public relations as publicity, but actually, it is selling—it is the art of persuasion. The motivating force in human beings is, what is there in it for me? To do a good public relations job, I think we have to appeal to this principle. If we don't, we fail. People, unfortunately, don't care anything about physicians' problems. They are interested only in their own problems."

Discussing plans for coverage of the so-called catastrophic illnesses, an Indiana physician observed:

"The chief problem in writing catastrophic insurance is to prevent excessive claims. One solution is to have deductible policies for which the patient pays the first $100 to $500 of his illness costs. Another is for the insurance company to pay perhaps 75 percent of the cost after deductibles—with the insured paying the other 25 percent."

Dr. Louis H. Bauer, President-Elect of the AMA, keynoted this excellent PR Conference when he said:

"If the members of a society would take an interest in its welfare, then the society would become a forceful agent in the community. If you do not like what your society does, it is probably because you have made no fight to change its policies. Nothing is accomplished by decrying the efforts of those who work, unless those who criticize are willing to work, too, and show how things can be bettered."

Thus, Dr. Bauer harked back to that significant statement that a kicking horse cannot pull and a pulling horse cannot kick.

From the Executive Secretary

ORGANIZATIONAL NEWS

Your Knoxville Phone Number

Doctor—Here's your emergency telephone number for the Annual Meeting in Knoxville, April 7-9. It's Knoxville 3-6176. There will be two instruments on this line—one incoming and one outgoing. All outgoing calls COLLECT, please! Have your secretary jot this number down now. You'll be paged and your name will be flashed on "phone screen" in scientific sessions.

Annual Meeting Time Table

Here's a time table resumé of one of the finest Annual Meetings ever—a meeting designed for you and consisting of business, education and fun.

★

Monday, April 7

HOUSE OF DELEGATES	Knoxville Academy of Medicine Building	9:00 a.m.
SPECIALTY SECTIONS:		
Tennessee Radiological Society	Skyline Room—Farragut	9:00 a.m.
Tennessee Diabetes Association	Tennessee Room—Farragut	9:30 a.m.
Woman's Auxiliary (Rgistration)	Farragut Lobby	10:00 a.m.
Tennessee Academy of General Practice (Annual Banquet and Business Session)	Ballroom—Andrew Johnson	6:30 a.m.
Tennessee Academy of Ophthalmolog and Otolaryugology	Rose Room—Andrew Johnson	
Tennessee Pediatric Society	Farragut Hotel	
GOLF TOURNAMENT	Holston Hills Country Club	1:30 p.m.
COUNTY SOCIETY OFFICER'S CONFERENCE	(See Public Service Section)	
COCKTAIL PARTY Members, House of Delegates and Wives Dr. R. B. Wood, Host	City Club	5:00 p.m.

★

Tuesday, April 8

GENERAL REGISTRATION	Mezzannine—Andrew Johnson	8:00 a.m.
SCIENTIFIC SESSIONS	Ballroom—Andrew Johnson	9:40 a.m.
WOMAN'S AUXILIARY	Skyline Room—Farragut	8:00 a.m.
WOMAN'S AUXILIARY LUNCHEON	Holston Hills Country Club	1:00 p.m.
PRESIDENT'S NIGHT	Ballroom—Andrew Johnson	8:00 p.m.

★

Wednesday, April 9

HOUSE OF DELEGATES	Knoxville Academy of Medicine	9:00 a.m.
SCIENTIFIC SESSIONS	Ballroom—Andrew Johnson	9:00 a.m.
FUN NIGHT PROGRAM	Deane Hill Country Club	6:30 p.m.

★

Other Groups Meeting, Too

Other groups and organizations meeting concurrently with the Association are tentatively scheduled as follows:

TENNESSEE CHAPTER, AMERICAN COLLEGE OF SURGEONS	Dutch Luncheon Ballroom—Andrew Johnson	Monday, 12:15 p.m.
POSTGRADUATE COMMITTEE LUNCHEON	Rose Room—Andrew Johnson	Tuesday Noon
PUBLIC HEALTH COUNCIL	Rose Room-Andrew Johnson	Tuesday, 9:00 a.m.
TULANE ALUMNI	Luncheon (place tentative)	Tuesday Noon
TENNESSEE SOCIETY OF ANESTHESIOLOGISTS	(Time and place to be selected)	

Scientific Program in This Issue

The full scientific program is published elsewhere in this issue, along with the programs of the Woman's Auxiliary, The Tennessee Diabetes Association, The Tennessee Academy of General Practice, The Tennessee Radiological Society, and The Tennessee Academy of Ophthalmology and Otolaryngology.

Special Memo to Delegates

Members of the House of Delegates will register in the lobby of the Knoxville Academy of Medicine beginning at 8:00 a.m. The Academy's building is three blocks from the Andrew Johnson (corner of Walnut and Cumberland). Come early and avoid the last-minute rush. Speaker Trabue says the gavel will fall at 9:00!

Resume of President's Night

President's Night will be an outstanding program. Dr. Daugh W. Smith will deliver his President-Elect address outlining his program as President in 1952-53. The Association will then present Dr. Louis H. Bauer, Hempstead, New York, President-Elect of the AMA as the President's guest speaker. A special interlude by an all-physician orchestra will be a feature of this program. Then will come the presentations of the Association's two awards—the winner of the Essay Contest and the winner of the Outstanding General Practitioner Award for Tennessee.

Knoxville Academy Goes All Out For Fun Night

After three days packed full of business and education, everyone will be ready for FUN NIGHT.

Transportation Furnished

This is the grand finale to a great meeting—all arranged for your pleasure by the Knoxville Academy of Medicine, the host society. The local committee on arrangements has spared nothing to give you a most enjoyable evening. Beginning at 5:00 p.m., Wednesday, the Woman's Auxiliary of the Knoxville Academy will have cars waiting for you at the entrance of the Andrew Johnson. Look for their placard, "HOP IN, DOCTOR." You'll be whisked to the beautiful Deane Hill Country Club for a gala event starting at 6:30 p.m. Here's the agenda:

What an Evening!

Cocktails 6:30 p.m.
Dinner (Out-of-this-world menu)
(Corsages for the ladies)
Introductions and acknowledgments—Dr. J. B. Naive, President, Knoxville Academy of Medicine
Wit, Humor and Special Awards by Dr. E. R. Zemp, Physician Master of Ceremonies
Professional Floor Show
Professional Dance Orchestra 'til———?

You Pay for Dinner Only

The tickets to Fun Night will be $5.00 and available at all times from the general registration desk. The $5.00 IS THE COST OF THE DINNER ONLY. All the other features of the program are being paid for by your host society—the Knoxville Academy of Medicine. Knoxville doctors are spending an extra $1,500.00 on this program—YOU CAN'T AFFORD TO MISS IT!

Reservation Made Yet?

It's not too late to make your hotel reservation, but rooms are getting scarce. You'll find hotel reservation blanks along with instructions in the Executive Secretary's section of the January and February Journals. Mail it today! See you in Knoxville.

Public Service

THE TENNESSEE TEN

These two yellow sections in your Journal are devoted to ORGANIZATIONAL NEWS AND PUBLIC SERVICE. It is fitting, therefore, that these two subjects be combined as the theme of a special meeting for public service committeemen and county medical society officers during the 117th Annual Session of the Tennessee State Medical Association.

Special Public Service Meeting

This session will be conducted in the Ballroom of the Andrew Johnson Hotel, Convention headquarters, at 3:00 P.M. on Monday, April 7, first day of the Convention. Three excellent speakers will discuss problems of medical society officers and public service.

Principal speaker will be Dr. Louis McDonald Orr, Orlando, Florida, urologist who had an important role in the organization of The Florida Medical Committee for Better Government. This Committee played a big part in eliminating Senator Claude Pepper from the political scene.

Doctor Orr is an alert and progressive leader of organized medicine, not just in Florida, but throughout the nation. He has a vital message to bring before this special meeting.

Doctor L. W. Edwards of Nashville, Chairman of the State Public Service Committee, will discuss the number one public service project for 1952-53. This is the proposal for State-County financing of hospital care for medical indigents, with doctors providing medical and surgical care free—as they have always done. Dr. Edwards also will discuss a quiet campaign to force the Veterans Administration to change some of its admission practices which are unfair to many veterans.

Too Easy to Belong to a Medical Society

Doctor Joe L. Raulston, immediate Past-President of the Knoxville Academy of Medicine, will deliver a message under this intriguing title: "It Is Too Easy to Belong to a Medical Society—Doctors Must Pay with More Than Just Dues."

Doctor Edwards will preside. Doctor Orr, who will discuss "Medical Men and Public Affairs," will be introduced by Dr. Sam L. Raines, Chairman of the Public Service Committee of the Memphis and Shelby County Medical Society, and long-time friend of Dr. Orr.

Following the three speeches, the meeting will be resolved into a panel discussion of public service and local medical society organizational problems. Panel members assigned to answer questions will be: R. H. Monger, M.D., veteran Secretary of the Knoxville Academy of Medicine; Stanford M. Herron, M.D., veteran Secretary of the West Tennessee Consolidated Medical Assembly; Tom J. Hitch, President of the Tennessee Farm Bureau Federation, Columbia; V. O. Foster; and Ed L. Bridges. Officers of the State and local Woman's Auxiliaries, and delegates to the State Auxiliary convention at Knoxville, will be invited to attend this special session.

Last month this section of the Journal was written by Dr. W. C. Chaney of Memphis, AMA delegate from West Tennessee. That article was noticed by Mr. Leo E. Brown, Director of the Department of Public Relations of the American Medical Association. Mr. Brown then wrote this letter:

Commends the Tennessee Ten

"Dear Dr. Chaney:

"I want to take this opportunity of congratulating you and also thanking you for the excellent report on our Public Relations Conference which appeared in The Journal of the Tennessee State Medical Association. You have presented a very good summary of the Conference, and we greatly appreciate your evaluation.

"The Public Relations Program of Medicine depends upon the continued support of interested, capable physicians like yourself. The Tennessee Ten program which you are promoting in your state is one of the finest in the country, and I trust that if we may be of any service to you in the field of Public Relations, you will not hesitate to call on us.

Sincerely yours,
(Signed) Leo E. Brown."

The Nashville, Chattanooga and Memphis Dairy Councils have given your Public Service Committee an excellent film on Nutrition entitled: "Weight Reduction Through Diet."

Movie Projector Is Available

The State Headquarters Office recently purchased its own movie projector available for use by the local medical societies. The Dairy Council film will be shown to public groups throughout the state. It also is available for use by any local medical society.

Knoxville doctors have pooled some $3,000 worth of drug samples for use in treatment of indigent patients at General Hospital, The Knoxville Journal learned last night.

The project is sponsored by the Medical Assistants Association. The samples were collected at various points over the city and are being sorted at the Knox County Health Bureau, 400 West Hill Avenue.

Spearheading the collection campaign is a committee from the Association. County Welfare Commissioner William H. (Bill) Maynard has assisted.

Medical Samples for the Indigent

Doctors receive thousands of dollars worth of medicinal samples yearly from pharmaceutical houses. In some instances, these samples are never used. The Assistants Association conceived the idea of utilizing this source of drugs on a wide basis for treatment of charity patients.

The samples are being relabeled and rebottled for dispensing to city-county patients. The drugs have not been given to the hospital yet, since the processing has not been completed.

The Assistants Association contacted each doctor by letter, asking his cooperation. The response was such that some $3,000 worth of drugs has been accumulated. Collections were made by the County Welfare Department.

An impressive project accomplished by the Nashville Auxiliary was the staging of an "Open House" meeting March 7th at Richland Golf Club.

Solid Attendance at Special Meet

Near 200 women representing various organizations, including the Drug and Dental Auxiliaries of Nashville, The Tennessee State Nurses Association, The Nashville Civic Forum, and out-of-city medical auxiliaries attended the luncheon meeting.

Mrs. Kris Peterson, Administrative Assistant to the Director of Public Relations for the AMA, was guest speaker. She gave those attending a stimulating and solid report of the contributions women are making toward the improvement and extension of medical care and health protection in this country.

Mrs. Peterson, a former newspaper woman, is author of an article in the latest Today's Health on Dr. A. C. Yoder of Indiana, who was recently elected "Doctor of the Year" by delegates to the AMA Convention in Los Angeles.

Mrs. Peterson clinched her talk with a provocative quotation by Edmund Burke, as follows:

"The only thing necessary for evil to rise in this country is for enough of the good people to do nothing."

From the Executive Secretary

ORGANIZATIONAL NEWS

News That Can't Be Reported (Now)

This issue of your Journal is caught on the horns of an annual dilemma. Here's why. We have to go to press on the first day of the month—just seven days BEFORE the Annual Meeting. It takes fifteen days to publish and mail, therefore you receive the Journal seven days AFTER the meeting. And just think of all the news that will be old before it gets into official print. It's too bad for the April (orphan) issue, but we thought you might want an explanation of this apparent obsolescence. WATCH FOR THE MAY ISSUE, the official Convention Number.

"Get Out the Vote Campaign"

Doctors Are Citizens, Too

Your Executive Secretary was recently elected to a three-man executive committee representing twenty-two state-wide trade and professional organizations in a "GET OUT THE VOTE" campaign. He, along with Mr. Tom Hitch, President, Tennessee Farm Bureau Federation, and Mr. David Whelchel, Executive Secretary of the Tennessee Automotive Association, are charged with helping organize the campaign in every county. The twenty-two organizations are now supplying the Executive Committee with a list of civic-minded members of each organization—thus providing a strong nucleus for further county organization. "DOCTORS ARE CITIZENS, TOO" and the profession has responded beautifully to appointments.

Aubrey Gates, able and affable representative of the AMA's Council on Rural Health, paid a two-day visit to the headquarters office on March 26-27. While here, he counseled with many agencies interested in rural health problems. Dr. W. N. Cook, Columbia, Chairman of the Association's Rural Health Committee, and Dr. James Loveless, Gallatin, member, along with the Executive Secretary and the Public Service Director, Ed Bridges, held a four-hour conference on the role of the Rural Health Committee of a medical association in solving rural health problems. The Committee is grateful to Mr. Gates for his stimulating vision and wise counsel on the doctor's role in a challenging co-operative undertaking.

Outstanding GP Contest

The Outstanding General Practitioner Award Contest was popular again this year. At press time, the following local medical societies had certified their candidates. They are:

1952 Candidates

Anderson-Campbell	Dr. J. S. Hall, Clinton
Blount	Dr. C. D. LeQuire, Maryville
Chattanooga-Hamilton County	Dr. Ed Jenkins, Soddy
Cumberland	Dr. May Wharton, Pleasant Hill
Davidson	Dr. R. K. Landis, Nashville
Hamblen	Dr. F. F. Painter, Morristown
Hamilton	Dr. Ed Jenkins, Soddy
Memphis-Shelby County	Dr. H. B. Everett, Memphis
Sullivan-Johnson	Dr. Eugene Maul, Kingsport
Washington-Carter-Unicoi	Dr. A. J. Willis, Jonesboro
West Tennessee (Consolidated)	Dr. Kelly Smythe, Bemis

Doctor's Assistants Course Successful

The Doctor's Assistant's Course in Public Relations conducted by Ed Bridges has been very popular. Ed regrets that other commitments prevent scheduling these courses in other societies in the near future. Ed plans, however, to make them available to other local societies (probably in areas conveniently located to several small societies) just as soon as a busy schedule will permit. The course (three sessions) has been completed in Chattanooga, Jackson, Nashville, and Knoxville. Memphis is tentatively scheduled for the near future.

New Medical Society Organized

A new medical society is off to a good start. Physicians in Henry, Weakley, Carroll, and Benton Counties set up a permanent organization on March 18. At a dinner meeting in Paris, Dr. Martin Beyer, Dresden, was elected president; Dr. J. Mansfield Bailey, Camden, vice-president; and Dr. John Newmann, Paris, secretary-treasurer. The scientific program was a paper on ACTH and Cortisone by Dr. Beverly Towery, Nashville, which was discussed by Dr. R. H. Kampmeier, our own Secretary-Editor. The new society is for social and scientific purposes only—none of component local societies of this Association will lose their charter or their relationship with the State Association. The Executive Secretary assisted in the organization at the request of physicians in Henry County.

Revised Schedule of Tennessee Plan Caught in WSB Regulations

The Tennessee Plan has struck another snag. Just as the Prepaid Insurance Committee completed its revision of the fee schedule, the Wage Stabilization Board issued GWR 78. This resolution prevents the extension of prepaid plans without Board approval if they do not comply with "Review Criteria" which allows little modification. The revised Plan does not conform to the review criteria in every respect, therefore automatic approval is not forthcoming. We have petitioned the WSB through our Tennessee Congressmen, spearheaded by Mr. Percy Priest, to consider the advisability of a modification of the present restrictions on voluntary, prepaid plans. Our position is that the widespread purchase of health insurance does not contribute to "unstabilization" of the economy. On the contrary, we believe protection against the costs of expensive illness through prepaid insurance to BE stabilizing. (More about this next month).

THE
TENNESSEE PLAN

SURGICAL
AND
OBSTETRICAL
PROTECTION
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BY

THE TENNESSEE STATE MEDICAL ASSOCIATION

Public Service

THE TENNESSEE TEN

Doctors and Fund Drives

A national magazine recently published an article titled: "WE HAVE BECOME A NATION OF COLLECTION TAKERS." It dealt with the ever-increasing number of drives for funds for this and that.

A gentleman in my home state of Georgia got himself some national notoriety by writing the President and suggesting a proclamation setting aside a "Leave Us Alone Week." He was weary, he said, of all the various drives, and of Apple Week, then Cheese Week, etc.

Suggestions have been made that all the medical fund drives be combined into one, a sort of Federated Medical Campaign Fund Drive. Personalities, differences in approach, etc., may prevent that for a long time.

Doctors particularly are solicited by fund raisers. Their total response is excellent. We have figures to prove it. Yet, some fund solicitors, or chairmen, have seen fit to criticize the profession for its response. So, it is heartwarming to receive a letter of appreciation like the following:

"March 25, 1952

"Mr. Ed Bridges
Public Service Director
Tennessee State Medical Association
Doctors Building
Nashville, Tennessee

"Dear Mr. Bridges:

"Now that the 1952 HEART Fund drive has drawn to a successful conclusion, I want to express the appreciation of the Middle Tennessee Heart Association for the excellent support and cooperation received from the doctors of Middle Tennessee.

"Some twenty-two doctors participated actively as solicitors in the campaign under the direction of Dr. Rollin A. Daniel, Jr., who served as chairman of the Doctors Division.

"The support and interest of members of the medical profession are deeply gratifying to the Middle Tennessee Heart Association, and the Association shall strive in every way to justify the confidence which has been shown.

"Sincerely yours,
Helen Bramwell
Executive Secretary"

This kind letter from Miss Bramwell did not of course, mention figures, but we understand that the cash response was a stout increase over last year's contributions by doctors in the area.

Medical Economics Reports Courses for Assistants

Your March issue of Medical Economics publishes, on pages 278-280-282 a story of the recently-concluded series of Public Relations Courses for Doctors' Assistants. Tried in Tennessee for the first time in the nation, the course has brought requests for the blueprint from some 20 other State Medical Associations.

More than 600 Doctors' Assistants, and doctors themselves, were reached by the PR course. This Department is indebted to some of the Underwriters of The Tennessee Plan for sending speakers to the last of the three evening classes—this one devoted to a study of health insurance claim forms and company procedures.

The Provident Life and Accident Insurance Company was represented at all four classes by Mr. Emerson L. Mitchell, Group Manager for Tennessee and Tennessee Chairman of the Insurance Council of America, and one of the Company's claims executives (at one class); Mr. James Waters, Comptroller, Mr. Ben Haynes, Relations representative, and Mr. Paul Speegle, Claims Manager, all of The Tennessee Hospital Service Association; and two representatives of Prudential from Newark, N. J.

This Department has received requests to repeat the courses during the next Association year, with new topics to be discussed. The request will be submitted to the Public Service Committee meeting in Knoxville during the 117th Annual Session of TSMA. One topic needing attention is bill collecting as good or bad public relations. There are others just as important to the doctor and his professional aides.

Memphis Society Opens New Office, Employs Director

This is a bouquet to the Memphis and Shelby County Society for establishing a full-time Public Service Department. The Society moved carefully and prudently for an entire year before the office was actually opened and a layman employed as Executive Secretary-Public Service Director. The Public Service Committee of the Society, headed by Dr. Sam L. Raines, spearheaded the movement, and the Committee will supervise the Director and his activities. Last year's President, Dr. William D. Stinson, and Current President, Dr. Henry B. Gotten, had much to do with planning and guiding the venture.

This also is a welcome mat laid down for Mr. Robert C. Bird, the new Executive Secretary-Public Service Director of the Memphis and Shelby County Medical Society. This is one layman's opinion: Bob Bird is highly capable, he understands the medical profession's problems, and he has the energy and talent to help the doctors toward a solution of them. His work will prove me right or wrong.

The Memphis office had been only three weeks when a Public Relations problem was met squarely. A Memphis newspaper called on the profession to assist the West Memphis hospital, a new 100-bed institution, with its problem of empty beds and imperiled budget. President Gotten and the Public Service Committee replied, in print in the same newspaper, that Memphis doctors would urge their patients to enter the West Memphis hospital whenever possible.

This probably will bring some letters to the editor, but we'll stick out our neck, anyway.

Three Medical Societies in the State cling to official names which are difficult to say, ponderous to print, and hard for the layman to remember.

They are: The Nashville Academy of Medicine and Davidson County Medical Society; The West Tennessee Consolidated Medical Assembly, and The Memphis and Shelby County Medical Society.

What would be wrong with making them: The Nashville Academy of Medicine, The West Tennessee Medical Assembly, and the The Memphis Medical Society. Memphis and Nashville have become known as large medical centers of the South and it would be understood that they included all their counties in the membership. Only in cities like Chicago and New York do they have a city and a county Society. And West Tennessee Medical Society indicates plainly that it is Consolidated.

Now, we're ready for the letters saying we're off the beam!

From the Executive Secretary

ORGANIZATIONAL NEWS

Memphis Next Year (April 13-14-15)

One of the finest Annual Meetings in recent years has come and gone. April 7-8-9 in Knoxville is a challenge to all of us for bigger and better meetings in the future. Plans are already under way for such a meeting next year in Memphis.

Proceedings of the Meeting

This issue of your Journal is called the Annual Meeting Number. Abstracts of the proceedings of the House of Delegates and the Board of Trustees are carried in this issue. Those who were unable to attend the meeting and detect the scope and significance of this Association's activities can get a bird's-eye view by perusing these abstracts. The things that will be missing, however, will be the good spirit of fellowship, the drama, the clock-like precision, and the atmosphere of solid accomplishment that ran like golden threads through the warp and woof of this meeting.

Again, as last year, the meeting was built around three themes—Business, Education, Fun. There was an abundance of all.

Well Deserved Bouquets

This is the proper time and place for bouquets, and dozens of people deserve them. There just isn't room in these pages to name them all. Here's the list that made major contributions to the grand success of the Convention:

For the Retiring President

Dr. Ernest Kelly, possessed of a great democratic spirit, laid out the welcome mat to representatives of other organizations. He deserved and received with humility the highest honors the Association could bestow. "Honoring Our President"—the dedication theme of President's Night was a well-deserved tribute to a fearless and loyal friend of medicine. Dr. Kelly, you grace the list of the distinguished physicians who have served as President of this Association.

The Editor

Dr. R. H. Kampmeier, Chairman of the Program Committee, presented a well-balanced scientific program that held good attendance to the very last paper. Your Executive Secretary took particular pains to check the scientific sessions at intervals, and gained the definite impression that they were "tops."

The Speaker

Dr. Charles C. Trabue, Speaker of the House, did a masterful job in presiding. The time-clock precision of its deliberations, the courtesy of its members, the fairness of the Speaker's rulings, the unity of purpose, and sound accomplishment of its actions—all add up to one of the smoothest legislative bodies your Executive Secretary has ever witnessed. Wonder, wonder, wonder—couldn't some important governmental legislative bodies profit by observing the parliamentary excellence, the serious attention to business, and the simple mechanics of our own House?

The New President

Dr. Daugh W. Smith, in his inaugural address, gave a spirited and forceful challenge to his colleagues to uphold the honor and confidence in medicine to the end that freedom in medicine shall be preserved, and that the profession may continue to have the respect from a grateful public that so large a majority of ias members so richly deserve. He condemned the selfish practices of the few who, by "fee gouging" and unsympathetic treatment of patients, are bringing an undeserved public condemnation on the entire profession. If you haven't read his full address in the April Journal, now's a good time to do it!

The President's Guest

Dr. Louis A. Bauer, President-Elect of the AMA, addressing the President's Night audience along with Dr. Smith, called for a professional house cleaning and a new unity and dedication to the Hippocratic ideals of medicine. He warned that the threat of socialization will not end until the profession courageously solves the problems of medical care in this country as free citizens on a voluntary basis.

The Essay Winner

Miss Faith Browning Nollner, winner of the Essay Contest, delighted and thrilled the President's Night audience in the poised and confident delivery of her winning essay. She caused the audience to renew its faith in the youth of today, and reaffirmed the belief that the future of America will rest in competent hands.

Our Exhibitors

The Thirty-Seven Exhibiting Firms, with their eighty-two trained and technical personnel, made a significant contribution to the scientific success of the meeting. We are grateful to our exhibitors for their loyalty, financial support, and scientific worth. Harry Jones, the courteous and affable "dean" of exhibitors, made a most fitting and delightful response on behalf of the exhibitors to an expression of appreciation for their help at the Fun Night Program.

The Local Committee on Arrangements

Dr. J. B. Naive, and his Committee on Local Arrangements, Drs. Ralph Monger, J. P. Cullum, Charles Smeltzer, Herbert Pope, John Lesher, Glenn Grubb, and Joe Raulston—all deserve our thanks for the multitudinous tasks that added so much to the smoothness of the meeting. Not only did they meet frequently over a period of MONTHS preceding the meeting with your Executive Secretary, but worked right up to the last strains of the dance orchestra at Deane Hill—seeing that everything to a toothpick was available for your comfort and pleasure. This Committee deserves the entire credit for one of the most pleasurable and successful Fun Nights ever. Attended by more than 400, the consensus is that Fun Night is here to stay.

The Public Service Director and Mrs. "B"

Ed Bridges, already busy with expediting, press and radio relations, publicity, and everywhere helpful and alert, took on the additional job of Director of Exhibits for this meeting. Ed, you did a wonderful job, and everyone appreciates it—doctors, wives, exhibitors, and visitors. This little bouquet would have a missing "rose" unless we remembered Mrs. Bridges. Marguerite was responsible for a lot of the smoothness, the promptness, and the thoroughness by which the chain of events moved. An expediter par excellence, to say nothing of her helping save the life, or at least the equanimity of the Executive Secretary—her help was indispensable and is deeply appreciated.

—And Many Others

We've got to quit, but the list deserving credit is just started. There's Miss Rawls, always on the job....Miss Batey, handling registration like a veteran....Dr. E. R. Zemp, Master of Ceremonies....The 124 Delegates....The Specialty Groups, a virile and "going places" General Practice Session....Guest Speakers....Mrs. Fran McMurray....Bob Bird ....Lots and lots of people....And what did it add up to? A GOOD MEETING!

* * *

MEETING BRIEFS

Registration

1) Registration....(incomplete) Physicians 521; other professionals (Nurses, Hospital Administrators, etc. 29; Exhibitors 82; Headquarters Staff and Assistants 10....TOTAL 642. Yet to be counted, Pathologists, Radiologists, GPs, Anesthesiologists, Ophthalmologists, and Diabetes Association. (Many of these failed to go to General Registration desk.) IN ADDITION, more than 150 members of the Auxiliary were in attendance. Best over-all estimate is that 850 persons attended the various meetings during the three days. Last year.... 642 (everybody).

County Society Officers' Conference Big Success

2) 135 people attended the County Society Officers' Conference on Public Service. Dr. Lewis McDonald Orr, Orlando, Florida, stirred the conference with his challenging address on citizenship and public affairs. Conference two years old....30 attended last year.

President's Night Popular

3) President's Night jammed and packed....People sitting in aisles and standing. Comments heard—"best meeting of the Convention," "superb," "this part of the meeting here to stay, let's make it bigger and better." (This program now two years old.)

Fun Night Better Than Ever

4) Fun Night has received all kinds of compliments from physicians, wives, exhibitors-another two-year-old feature. More than 400 people stayed over for this last, but delightful event.

Friends Attend, Too

5) More lay people attended than ever before. Estimated number 50—included invited guests, Doctor's Assistants, representatives of other trades and professions.

—And a Little Profit Besides

6) Cost of Annual Meeting....$3,768.79. Revenue from Exhibits.... $5,000.00.

* * *

Public Service

THE TENNESSEE TEN

Faith Nollner Wins Another Essay Contest

Faith Browning Nollner, winner of the latest essay contest sponsored by the Woman's Auxiliary to The TSMA, is developing the habit of winning.

Faith Browning Nollner

One day after she read her essay in Knoxville at the 117th Annual Session, she was notified that she had won first prize in the Upper Cumberland Electric Corporation's essay contest. The subject was: "Electricity on the Farm."

Among the congratulatory letters received by Miss Nollner was one from Cordell Hull, former Secretary of State and former resident of Carthage, where Miss Nollner resides with her proud parents, Mr. and Mrs. James Nollner.

Besides her ability at essay writing, Miss Nollner has other talents. She is a four-year honor student in Carthage High, a basketball player, a pianist, a singer, dramatic reader, editor of the school paper, and area student representative of the DAR at a recent meeting in Nashville.

Doctors please note: If you need an assistant in your practice some six or eight years hence, we suggest you contact Miss Nollner. She will enter Maryville College next fall as a pre-medical student.

This department has been flooded with requests for copies of the winning essay, so here it is:

"MY PRIVILEGES IN AND RESPONSIBILITIES TO A FREE COUNTRY"

Faith Browning Nollner

"High on the hilltop above the school, the American flag rippled and danced in the wintry air. As it billowed back and forth, its folds seemed to become the pages of a giant history book—the record of the founding and growth of a nation. Here were the bleak shores of New England—a band of shivering patriots at Valley Forge—a Continental Congress—Washington's farewell address. Across this page marched the tired boys of the Confederacy—the dark days of reconstruction. Here, khaki-clad lines embarked for France to make the world safe for democracy. Now, the epic of palm trees, sand dunes, fox holes, all around the world where American boys have shivered and sweated, triumphed and died to keep that flag aloft.

"Beyond that dancing flag were the homes of the town—homes of wealth and of poverty, homes of white and Negro, business houses, factories, churches and, far in the distance, the dun-colored cornfields. This was America, my country, the 'land of the free.' Along with the sense of pride which swept over me there came an overpowering sense of responsibility. If, in the folds of that flag, I had read an accounting of the deeds of others, so one day would someone else read the story of my generation.

"'Land of the free'....From every corner the phrase is tossed lightly. The uprising of the masses, the search for freedom—what is this freedom for which all men seek? Is it merely liberty? Is it the loosing of shackles whether of society or government? Is it simply a breaking away from the old? It may be all this and more. One fact stands out clearly in the study of mankind's struggle. That is that man's very nature cries for freedom, and to satisfy this hunger, his energies have been expended, barriers thrust back, wars waged, science advanced.

"'Freedom,' someone said, 'is a need of the soul, and nothing else.'

"A free country, then, is one in which each individual has the opportunity of developing to the limit every part of his being—physical, mental, moral and spiritual.

"This recognition of the worth of the common man and the determination to assure him a chance for growth is the underlying principle of a democracy. Every right guaranteed by our Federal Constitution is designed to give the individual 'the freedom of the height, the tablelands of clear and far visions and accomplishments.'

"As civilization has advanced, the safety of man's person has become more assured. No more do we dart cautiously from place to place, fearful of each shadow that crosses our path. The physically weak walks unafraid of the giant, the humblest is guaranteed equal rights with the powerful. Our life, liberty, property, even our right to privacy, must be respected under the Constitution. If these are our rights, then we should make every effort to see that others are accorded the same. As an individual, we should practice an attitude of fair-mindedness to every other person, and do our part to mold public opinion to this end.

"Our founding fathers believed that whatever qualities and faculties are resident in people should be given a chance to develop, and along with other freedoms, guaranteed to us freedom of thought, freedom of speech and freedom of the press. Autocracy places limits on the development of an individual because free thought and free speech may endanger its authority. The head, whether it be an individual or a state, must tell the masses what to think, what to read, what to say, otherwise the pattern of life might be changed. It has been said that the quickest way to destroy the problems of a free mind is to destroy their freedom.

"We citizens of a free country claim the right to launch out in search of new frontiers of knowledge and undersanding of this universe and its workings. The ignorant man, being the easiest prey to want and fear, is a potential danger to himself, to this country and to the world; so we should strive to give every man a chance to acquire knowledge. Thomas Jefferson said, 'Were it left to me to decide whether we should have a government without newspapers or newspapers without a government, I should not hesitate to prefer the latter. But I should mean that every man should receive those papers and be capable of reading them!' Without this freedom of expression, democracy cannot exist. There are still many areas in our country where this ideal of Thomas Jefferson does not exist. It should be our goal not only to secure the best possible education for ourselves but to work for larger appropriations for teachers' salaries and better schools and equipment. As we keep our minds open about today's problems and learn and talk more about freedom, we should be alert to those individuals who seek to undermine or destroy our government and be daring in exposing them.

"Ruy Barbosa, the great Brazilian statesman, admirably expressed one of our most cherished convictions when he said, 'Of all the freedoms, freedom of conscience is the greatest and the highest. Of all civil liberties, none is so congenial to man, so noble, so fruitful, so peaceable, and so akin to the gospel, as religious liberty.' How humble we Americans should be when we realize that it was for this liberty our nation was founded. Today when our national life reeks of corruption and immorality, we should arouse ourselves to the dangers which surround us. No longer should it be merely the right and duty of every citizen to vote—it should be a matter of desperate importance to study the issues and the candidates and to stand mightily for right and principle regardless of party affiliations.

"Realizing that a nation cannot rise higher than the aspirations of its people, we should study the thought and purposes of those immortal founders of our country and in our individual lives and our national life pray for a return to those principles of integrity and virtue which made them great.

"Whittaker Chambers, in his recent story, 'I Was the Witness,' tells the story of the former German consul general in Moscow who had turned from pro-Communism to extreme anti-Communism. His daughter, in trying to shield him from criticism, said this, 'He was immensely pro-Soviet, and then, one night in Moscow, he heard screams. That's all. Simply one night he heard screams.'

"Please God, may America never be the land in which the people hear screams in the night. But instead, may we always hear America singing. And to accomplish this end may we humble ourselves before a merciful God, confess our national sins, and pray for clemency and forgiveness."

From the Executive Secretary

ORGANIZATIONAL NEWS

Revised Tennessee Plan Approved

Under the date of May 19, the Wage Stabilization Board approved the REVISED Schedule ($200.00 maximum benefit). This clears the way for a rapid expansion of The Tennessee Plan. The revised schedule will be substituted in the policy forms of all of our 33 underwriters as rapidly as possible.

Family Income Limit Raised to $4,200.00
New Physicians' Agreement Needed

The total family income limit for full service under the revised Plan will be raised from the present $3,600.00 to $4,200.00. This means that new participating agreements must be signed before the Association can assure the public that the new schedule will be serviced. Within a few days, all physicians will receive a copy of the REVISED schedule and a blank participating agreement. The only change in the agreement form will be substituting $4,200.00 for the $3,600.00 in the present agreement.

Every effort will be made to make the "change-over" to the REVISED schedule as rapidly as possible. It will require patience and cooperation from everybody—the underwriters, participating physicians, and the public. These things will help:

Your Part in the "Change-Over"

THE DOCTOR'S PART: (1) Sign and return the new participating agreement as soon as received. (2) Remember that all present contracts must be serviced on the basis sold ($175.00 maximum benefit, and $3,600.00 total family income for full service). (3) Be prepared to "wait out" the change-over period which will require at least 12 months. (4) Promote and encourage your patients to BUY THE TENNESSEE PLAN. There's a lot of hocus-pocus insurance being sold to the public, and such charlatanry is seriously injuring the cause of voluntary health insurance.

The Underwriter's Part

THE UNDERWRITER'S PART: (1) File new policies with the Association which incorporates the Revised Schedule of Benefits. (2) Refuse to sell ANY NEW ACCOUNTS the old schedule. (3) Substitute the Revised Schedule in all present Tennessee Plan contracts at the FIRST renewal date. (4) Revise all promotional literature to conform to the benefits under the revised schedule. (5) Launch a hard-hitting sales campaign. (6) Educate sales persons and agencies with the revised provisions of the Plan. (7) Make a serious effort to liberalize enrollment policies so as to make The Tennessee Plan available to individuals and small groups—a serious weakness to date.

* * *

Tennessee Medical Foundation

First steps in the chartering of the Tennessee Medical Foundation have been taken. All pertinent documents—the charter, and constitution and by-laws have been prepared. Next steps are naming five incorporators (who become the first board of directors) and calling a meeting of the incorporators for the election of officers and the establishment of the general policies of the Foundation.

Authorized by House of Delegates

The incorporation of the Foundation was directed by the House of Delegates of this Association at the annual meeting. The Board of Trustees, in turn, authorized the Executive Secretary and the Chairman of the Board to proceed with the incorporating acts. All official papers incident to the chartering were prepared by our legal counsel, Mr. Chas. L. Cornelius, Sr., Nashville.

Purposes of the Foundation

The purpose of the Foundation, as stated in the Charter and in the Constitution, is stated as follows: "This Foundation is organized and operated exclusively for scientific purposes. Its activities shall be confined to the extension of medical knowledge, the advancement of medical science, the elevation of the standard of medical education, and the prevention and cure of disease. No part of the activities of the Foundation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and no part of the net earnings of the Foundation shall inure to the benefit of any private shareholder or individual!"

All future contributions to the Building Fund of this Association should be made to the Tennessee Medical Foundation, and for the present, mailed to the Executive Secretary's office of the Tennessee State Medical Association.

Tax Exemption and Deductibility of Contributions Assured

The incorporation of the Foundation was necessary (under the non-profit corporate laws of Tennessee) to assure that contributions to the Building Fund would be deductible for federal income tax purposes, and to further assure that the building would be exempt from local city and county property taxes.

In addition to providing this Association with adequate and appropriate headquarters, it is hoped that the building will permit the leasing of adequate headquarters space to other allied organizations.

Fund Raising Campaign to Be Launched

Dr. Ralph Monger, Chairman of the Building Fund Campaign, visited the headquarters office recently and plans were mapped for an intensive campaign immediately. The drive for funds will begin just as soon as the incorporation of the Foundation is completed.

Goal $100,000.00

The fund-raising program will be highlighted as follows:

GOAL—$100,000.00.

CONTRIBUTIONS—Cash and pledges over a three-year period.

CONTRIBUTORS—Physicians and any other person or corporate body.

LOCAL CAMPAIGN COMMITTEES—Every local medical society will be requested to appoint a Committee to direct the drive for funds.

AVERAGE PHYSICIAN QUOTA—$50.00. Two thousand members, giving or pledging an average of $50.00 each, will assure the success of the campaign. Your local society quota can be easily determined by multiplying your membership by 50. Local Committees will be advised periodically of the contributions received from the society.

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Association's Group Policy Being Well Received by Members

The Hartnett-Geny Agency, exclusively approved agents for the Association's group accident and sickness policy, reports rapid enrollment progress. While enrollment is satisfactory, at least 625 new applications must be received by the Agency by August 1st. The Agency reports that it has received 41 new applications from the members of the Knoxville Academy of Medicine. This gives them an enrollment, percentage-wise, of 60 per cent of their entire membership. This record is a challenge to all other local societies, and if each enrolls in the same proportion there will be no doubt that the 625 minimum subscribers will be secured during the enrollment campaign. (See Agency's Ad, page XXIII of this issue.)

Public Service

THE TENNESSEE TEN

Henry H. Miller Executive Secretary Hospital Association

Mr. Miller

The Tennessee Hospital Association has a new President, Administrator M. G. Hubbard, of Nashville General, and a completely new setup in the form of the office of Executive Secretary.

In its annual meeting in Memphis last month, the THA voted to establish permanent headquarters in Nashville and chose as the first Executive Secretary Henry H. Miller. Mr. Miller has a background of solid accomplishments in the field of hospital administration. He is a past president of THA, a Director of the Tennessee Hospital Service Association and a member of the American College of Hospital Administrators.

Mr. Miller has served two terms as a member of the Hospital Advisory Committee for the State of Tennessee and as a member of the House of Delegates of the American Hospital Association.

This Department welcomes Mr. Miller to the field of public relations and from a personal knowledge of his abilities, we predict for him a high degree of success.

Public Service Committee Meeting Is Productive One

When the Public Service Committee of TSMA has a meeting, it HAS a meeting. Dr. L. W. Edwards, Chairman, called a session for Sunday, May 18, and all except three members attended. Those three were on vacation. The meeting even attracted a doctor who was an interested visitor and co-chairman of the Public Service Committee on his own Medical Society.

The attendance was matched by the interest of the members who gave solid suggestions, advice and guidance to the Director, whose job it is to implement the program and policies worked out by the Committee and the entire membership of TSMA.

Three Big Projects and Other Broad Services Planned

While major emphases will be placed on three projects, the Committee sanctioned a broad program of services to the public and the profession. The three major projects seek: (1) Passage of legislation next year to provide state-county financing of hospital care for Tennessee's medically indigent, (2) a get-out-the-vote campaign during 1952 elections and (3) heavy recruitment of nurses for bedside nursing.

Besides the Chairman, Director and his Secretary, those attending Sunday's session were Drs. H. L. Monroe of Erwin, Chas. C. Smeltzer and R. B. Wood of Knoxville, C. B. Roberts of Sparta, W. A. Garrott of Cleveland, Thurman Shipley of Cookeville, W. C. Chaney and Harold Boyd of Memphis, J. Marsh Frere of Chattanooga, W. K. Owen of Pulaski, John R. Thompson, Jr., of Jackson, J. Owsley Manier of Nashville, and Dr. Daugh W. Smith, President of TSMA, Dr R. H. Kampmeier, Secretary-Editor of TSMA and Dr. Roy L. McDonald of Knoxville, visitor.

The project seeking complete medical care for the medically indigent is rapidly gaining support of the general public and strong statewide organizations. Two of these organizations already committed and active are the Tennessee Farm Bureau Federation and the Tennessee Congress of Parents and Teachers.

Medical Societies Endorse Projects, Not Candidates

Medical societies are forbidden by law to endorse candidates for public office as an official action. But they certainly can, and should, talk to candidates about important issues. We hope that every member of the TSMA will make it a point to contact candidates for the Legislature, especially, and ask them for some type of commitment for the general proposition of an appropriation to provide state-county free hospital care for the medically indigent. Our members already have committed themselves to the continuation of the practice of long standing; that is, providing free medical and surgical treatment of the hospitalized indigent.

All four gubernatorial candidates have been apprised of the general nature of the indigent care project, and at least one of them has committed himself to it in a public address. Another one has committed himself privately.

The Public Service Committee will send to all TSMA members within the next month a pamphlet giving the ABC's of the indigent project so that you will have talking points when you go to see candidates for the Legislature and for Governor.

The Public Service Committee voted to ask the local Auxiliaries and the State Auxiliary to enter the Get-Out-the-Vote Campaign as a major project. Several local Auxiliaries already have done an excellent job in this capacity.

The Committee also instructed the Director to ask each one of the 48 local societies to devote one or more meetings each year to medical ethics and other problems which currently are prompting criticism by the public.

Memphis Society Shows the Way

On May 27, the Memphis and Shelby County Medical Society conducted such a meeting. It was a solid achievement in public and professional relations and is reported in full in another section of this Journal. Dr. Henry B. Gotten, Memphis President, deserves special commendation for conceiving the idea of this meeting and the society's Public Service Committee, headed by Dr. Samuel L. Raines, deserves a bouquet for its promotion and arranging of the meeting. Another bow is due Robert C. Bird, new Executive Secretary-Public Service Director, and his Secretary, Martha Halbert, for executing the Committee's meeting plans.

SPECIAL APPEAL: You are respectfully urged to return the postcard sent to you by the Public Service Committee as the first step in a timetable of events in the Get-Out-the-Vote Campaign. This postcard was enclosed in a personal letter to some 2,100 members of the Association. The Committee would greatly appreciate 100 per cent return of the cards so that we can inform the general public that doctors and their wives are registered solidly and intend to use their voting rights in the crucial elections this year.

Borrowing from Knoxville Bulletin

Dr. Ralph H. Monger, Secretary of the Knoxville Academy of Medicine, issues an alert and useful Bulletin for his Academy. The latest issue contains a poll conducted by the National Doctors' Committee for Improved Medical Service. The poll covered 21,000 doctors representing every branch of the profession in the 48 states. Some of the information is worth abstracting and reprinting here.

Ninety-nine and two-tenths per cent of the doctors polled believe that the federal medical system needs immediate improvement.

Eighty-four and three-tenths per cent believe a federal Medical Board with full authority to facilitate bed needs, and by implication, implement as many Hoover Commission's recommendations as possible by administrative action, should be created. Such a Board is recommended by the AMA.

Eighty-seven and five-tenths per cent believe that the VA medical system should be included in a proposed federal medical system in which the 35 competing federal medical systems would be coordinated.

Ninety-five and nine-tenths per cent believes steps must be taken immediately to stop abuses in handling non-service-conducted cases by the VA.

Ninety-four and three-tenths per cent believe the profession has an opportunity it may not have again for years to obtain constructive legislation.

From the Executive Secretary

ORGANIZATIONAL NEWS

All Tennessee Physicians Receive New Fee Schedule

2,000 New Agreements Expected

3,049 licensed physicians in Tennessee have received a letter from this office advising them of the revision of the Tennessee Plan. The revised fee schedule and a new participating physician's agreement were enclosed. The letter described the improvement in the fee schedule and carried a strong appeal for every physician to sign and return the new agreement immediately. Our goal is 2,000 participating physicians in 30 days. If Tennessee physicians respond as we believe they will, the Tennessee Plan will be off to new records.

Tennessee Plan Shows Rapid Growth

Within less than three years, the present Tennessee Plan has achieved a prominent place among prepaid plans sponsored by state medical associations. Here's the record to date:

33 approved underwriters
1,722 participating physicians
390,000 enrolled

Our underwriters include some of the largest and smallest commercial companies; and two non-profit associations, the Tennessee Hospital Service Association and the Memphis Hospital Service and Surgical Association. The participating physicians include general practitioners and every specialty, both members and non-members of the Association.

The Public Has Confidence in the Plan

Enrollees include farmers, teachers, bricklayers, truck drivers, lumberjacks—all kinds of people who work for a living—the people who have a hard time with their budget. These people need protection against the unpredictable costs of serious illness. The Tennessee Plan gives them this protection, plus certain other distinct advantages. 1) They have confidence in the Plan because doctors are in it and behind it. 2) They have security because the insuring clauses and benefits are uniform, irrespective of the underwriting agency. 3) And finally, they have bona fide protection against the economic shock of surgical bills.

The Tennessee Plan and the National Voluntary Prepaid Movement

The Tennessee Plan, through the cooperation of doctors and underwriters, fits neatly into an unprecedented expansion of voluntary health insurance that is nation-wide. The rapid growth and spread of voluntary protection against the costs of illness prove that compulsory plans under governmental control are neither necessary nor desired. Here are some statistics just released by the Health Insurance Council:

The People Want and Buy Voluntary Insurance

85,991,000 in U. S. have hospital insurance
65,535,000 have surgical insurance
27,723,000 have medical insurance

Hospital coverage increased 12% in 1951 over 1950, surgical coverage increased 20%, and medical coverage increased 28%. This is a phenomenal record when it is remembered that large scale development of voluntary plans did not start until 10 years ago.

Voluntary Health Insurance Now Covers Majority Outside Public Assistance and Compulsory Programs

The above statistics cover only people who have voluntarily purchased their health insurance. They do not include workmen's compensation, disability benefits, commercial accident benefits, dismemberment benefits, medical care of military personnel, medical care in public institutions, veterans benefits, and other medical care programs sponsored by the federal government through more than 30 agencies with more than 25,000,000 persons eligible for a federal benefit. The total number of persons either receiving or eligible to receive these benefits is estimated at 30,000,000.—and that does not include the beneficiaries of four state compulsory cash sickness plans operated by Rhode Island, California, New Jersey and New York with 10,000,000 workers covered.

Tennessee Statistics

Here's the health insurance picture in Tennessee: (voluntarily purchased)

1,257,000	insured against hospital bills
848,000	insured against surgical bills
172,000	insured against medical bills

When the beneficiaries of public assistance programs, public institutional care, indigency care, voluntary agency assistance and workmen's compensation are added to the private insurance listed above, it is clear that the economic shock of illness has been removed from a majority of the family budgets of Tennesseans.

Tennessee Plan Equals Nearly 50% of All Surgical Insurance in State

The significant role of the Tennessee Plan in this program is indicated by the fact that of the 848,000 Tennesseans holding voluntary surgical insurance, 390,000 have the Tennessee Plan—all purchased in less than three years!

With the revised schedule being pushed by our underwriters and with the great majority of our members serving as participating physicians, a sharp rise in Tennessee Plan enrollment is anticipated by the end of 1952. DOCTOR, HAVE YOU SIGNED AND RETURNED YOUR NEW PARTICIPATING AGREEMENT?

Doctor's Sickness and Accident Program Lagging

The Hartnett-Geny agency, exclusive underwriter of the State Association's Group sickness and accident policy for our member physicians, reports discouraging results so far in the enrollment period which will close August 1. Less than half of the required 625 NEW applications have been received. Doctor, it's to your advantage to sign and mail that application now. Don't put it off to the last minute. See Agency's ad on page XXI.

Headquarters Office Moving

Your headquarters office will move shortly to 321-25 Doctors Building—two floors below the present location (same building). We were fortunate in securing the additional space which the new quarters will provide. Your staff has been seriously handicapped for the past year with inadequate working space. Although the new offices will give us 50% more "elbow room," the increase in the rent is very nominal.

Tennessee Medical Foundation Chartered

The new location is an interim move. We are looking forward to really adequate offices in the new building which the Tennessee Medical Foundation will construct. The Foundation is well on the way to reality. Four of the six incorporators have signed the petition for the charter; the other two, Nashville men, will have signed before you get this Journal. Incorporators are Drs. Frank Roberts and E. G. Kelly,

Fund-Raising Campaign to Start Soon

Memphis: Drs. D. W. Smith and John B. Youmans, Nashville; Dr. A. M. Patterson, Chattanooga; and Dr. Ralph Monger, Knoxville. Dr. Monger is also Chairman of the fund-raising campaign which will begin in earnest as soon as the incorporators of the Foundation can have a meeting, elect officers, adopt a Constitution and By-laws and get the organization under way. The six incorporators constitute the first Board of Directors, which can be increased in number if necessary.

Last Minute Item

Just before press-time, we received two mails. Among the usual armful of mail were nearly 500 new participating agreements from doctors all over the state. This is really heartening. It shows that physicians are solidly behind the Tennessee Plan. It shows also that the revised Plan is going to have real doctor support and participation. WE NEED YOUR PARTICIPATING AGREEMENT, TOO. It's on your desk (if you haven't returned it). It needs no postage—just your signature. Let's have 2,000 in the next ten days! Our thanks, on behalf of your patients, are extended to all of you for your cooperation. The Tennessee Plan is an outstanding Public Service project. Your participation makes it so. The Plan is on the way to rapid growth and expansion.

Public Service

THE TENNESSEE TEN

Healing the body requires your skill,
Healing the body politic requires your will,
Be sure you register, be certain you vote!

But Now the Flood Subsides

The Public Service Committee's campaign to get-out-the-vote opened on an encouraging note. Within a week after registration survey cards were sent to the 2,100 members of the Association, about 1,100 were returned. That meant that more than 50 per cent of the members, and their wives, were registered. All these also promised to vote in all elections, barring providential cause, and to contact at least five other persons each, and urge them to register and vote.

But now the return of the survey cards to State Headquarters has become a trickle. Now is the time for the local Citizenship Committees to contact those members, and wives, who have not registered. The deadline for registration for voting in the August 7 primary is July 18, about the time this issue of the Journal hits your desk.

The Woman's Auxiliaries are jangling telephones and making personal contacts, urging doctors' wives to register. This is strictly a non-partisan movement. Medical Societies are barred by law from officially endorsing any candidate for any office.

The Public Service Committee believes that if 95 per cent of the Association members register and vote, then 95 per cent of that 95 per cent will vote for candidates who will work for the protection of the health and welfare of the people.

The Bare Neck Gets the Axe

In a recent issue, this column suggested a shortening of the names of several local and sectional Medical Societies in Tennessee. We invited comment, realizing that the neck was bare for the axe. The first swish of the axe came in this humor-softened letter:

"Dear Sir:

"Reference to changing the names of three of the Associations of the State.

"The West Tennessee Medical and Surgical Association was organized in 1892 as a sectional association just as are the Middle Tennessee and East Tennessee Associations.

"The West Tennessee Consolidated Medical Assembly was organized more recently and is an excellent society, serving a great purpose.

"Both the above have had these designations since they were organized, and it appears that a change in the name of the latter one would certainly confuse it with the old West Tennessee Association.

"Any doctor who can say "Sub Luxation of the Sacro Iliac Synchondrosis" can certainly remember West Tennessee Consolidated Medical Assembly—the same applies to printing the name in a Journal. A layman probably could not say either—nor particularly care to.

"You asked for it—and here is one of your first letters. Some of these doctors will probably make a speech comparable to the one when somebody tried to change the name of Arkansas!

"Very truly,
GEORGE R. McSWAIN
Paris"

Contact Your Candidates for the Legislature

The time is here for personally contacting candidates for the 1953 General Assembly, and for asking them to commit themselves, preferably in writing, to the general proposition of an annual appropriation for State-County financing of hospital care for all medically-indigent Tennesseans. Please read the open letter to all Association members in another section of this Journal. It presents in compact form the position taken by the Public Service Committee on this humanitarian proposal.

The big question involved in this proposal is one that doctors always ask when the project is mentioned. They want to know: "Who is medically-indigent? What determines a medical-indigent? Who is going to decide upon medical indigency in Tennessee?"

A big California county which operates a successful hospital care plan for the unfortunate, has written down its definition of medical indigency. It reads like this:

"Any person is medically indigent if he cannot pay for the medical care he needs, and if his relatives cannot pay for it, without both of them depriving themselves and their dependents of the essential necessities of life."

The State of Maryland seems to have the most workable medical indigency plan. It was perfected three years ago when the State Health Department and medical profession took it over.

In Maryland, there is a committee in each county, composed of about ten persons. Among these persons, such as labor and management and farm leaders, a minister, a county official, public school administrator, there is knowledge of the financial condition of virtually every citizen within the county. Or the committee, so made up,can easily determine whether a citizen is medically indigent. Proof that this committee is doing a tough, yet humanitarian, job of screening is found in the fact that since the new regime began the State is spending much less money than before.

It Can Work in Tennessee

If such a plan works in Maryland, it can work in Tennessee. Establishment of these local screening committees would serve to weed out the malingerers, the deadbeats and the hypochondriacs.

There is one significant difference in the proposal in Tennessee, as sponsored by your Public Service Committee. In other states having similar plans, the doctors, and dentists, are paid small fees for hospital treatment of the indigent. In Tennessee, doctors will follow their age-old custom of providing this medical and surgical treatment at no cost whatever to the patient, or the State. Tennessee physicians feel that this is one of their high duties as a member of the profession charged with healing the human body.

PS Committee Aids Nursing Recruitment

One Point of The Tennessee Ten calls for co-operation with The Tennessee State Nurses Association in efforts to produce more nurses. Until now, little has been done about this. However, the Public Service Committee now has authorized the Director to join the TSNA in a month-long (probably October) intensified drive for nursing student recruits. Already, the Committee has financed the publication of a new pamphlet designed to attract high school students to a career of nursing. These pamphlets will be given to high school students at the fall fairs, at special school assembly programs and wherever they can be contacted personally.

During the October drive, the local medical societies are asked to provide physician-speakers to accompany nurse-speakers to special assembly programs devoted to "Nursing as a Career." Thus the program will reach students from the freshman class through the graduating class.

Tennessee has 16 nursing schools approved by the State Nursing Board. They turn out about 7,000 graduates a year, but many of these return to their home states to nurse. Another factor cutting into the production is marriage One-third of nursing graduates marry within a year after graduation and 85 per cent marry by the end of five years. Of course, some of these continue to nurse. But all things add up to a shortage.

From the Executive Secretary

ORGANIZATIONAL NEWS

Tennessee Medical Foundation Established

The Tennessee Medical Foundation is now a reality. Authorized by the House of Delegates of this Association in April, a charter has been secured, and the first meeting of the Incorporators has been held. At the meeting on August 2, the charter was accepted. Incorporators present were Drs. Frank Roberts and E. G. Kelly, Memphis; Drs. Daugh W. Smith and John Youmans, Nashville; and Dr. Ralph Monger, Knoxville. Dr. A. M. Patterson, the sixth incorporator, was absent because of illness. Others present were Mr. Charles Cornelius, the Association's legal counsel, Mr. Ed Bridges, Public Service Director, and your Executive Secretary.

First Meeting of Board of Directors

Dr. Monger was elected Chairman pro tem. and V. O. Foster Secretary pro tem. for organizational purposes. The incorporators, constituting the first Board of Directors, went into session for the election of officers and other business. The following permanent officers were elected:

Officers Elected

President	Dr. Ralph Monger, Knoxville
Vice-President	Dr. E. G. Kelly, Memphis
Secretary	V. O. Foster, Nashville
Treasurer	Dr. Daugh W. Smith, Nashville

The Directors then adopted the By-Laws, highlights of which are as follows:

Major By-Law Provisions—Purpose

ARTICLE II—PURPOSE

"This Foundation is organized and operated exclusively for scientific purposes. Its activities shall be confined to the extension of medical knowledge, the advancement of medical science, the evaluation of the standard of medical education, and the prevention and cure of disease. NO PART OF THE ACTIVITIES SHALL BE THE CARRYING ON OF PROPAGANDA, OR OTHERWISE ATTEMPTING TO INFLUENCE LEGISLATION, and no part of the net earnings of the Foundation shall inure to the benefit of any private shareholder or individual.

Classes of Membership

ARTICLE IV—MEMBERSHIP

"The membership of the Foundation shall be composed of Sustaining Members, Founders and Life Members. (Any individual or organization may hold membership.)

Classes of Membership

"(a) Any active member who has contributed $25.00 up to $500.00 is a Sustaining Member.

"(b) Any active member contributing $500.00 to $1,000.00 is a 'Founder.'

"(c) Any active member contributing more than $1,000.00 is a life Member.

"Contributions from year to year by members shall be cumulative in determining proper membership classification.

Control Vested in Board of Directors

ARTICLE VI—BOARD OF DIRECTORS

"Control of the business and affairs of the Foundation are vested in a Board of Directors, the Incorporators serving as the first Board. Subsequent Directors are to be elected from the membership at annual meetings."

Previous Contributions to Be Transferred to Foundation

The Board of Directors at this first meeting placed the Treasurer under a $10,000.00 fidelity bond. The Secretary was also instructed to request the Trustees of the Tennessee State Medical Association to transfer the funds to the Foundation which had been contributed to the Association's Building Fund.

Dr. Monger to Renew Fund Drive

Dr. Monger, who had been designated as Chairman of the Building Fund Campaign, which the Foundation's fund drive will supplant, will continue to serve as Chairman of the drive for funds for the construction of the Foundation's headquarters.

The Goal

The Goal remains the same—$100,000.00. Although the Foundation may accept funds from any source, it is expected that the great bulk of the contributions (membership) will come from members of this Association.

Local Societies Asked to Name Fund Chairman

President Monger will renew the fund-raising campaign immediately. All local medical societies will be requested to name a chairman or a committee to head up the membership drive in each society. The goal of $100,000.00 is equivalent to $50.00 per member of this Association. A local society's quota can be easily determined by multiplying its membership by 50.

Members of the Association are requested to notify Dr. Monger, Medical Arts Building, Knoxville, or the Secretary, V. O. Foster, 325 Doctors Building, Nashville, of persons or firms (not physicians) who would like to make contributions to the Foundation.

Contributions Deductible for Income Tax Purposes

All contributions (membership purchases) are DEDUCTIBLE FOR INCOME TAX PURPOSES. The Foundation was chartered and its purposes stated in the Charter in such a way as to assure deductibility of contributions.

Will House Association Headquarters and Others

The building which the Foundation will construct will be rented or leased to the Tennessee State Medical Association for headquarters. Other allied groups such as the Nashville Academy of Medicine, the State Dental Association and voluntary organizations could secure headquarters space in the building also. It is expected that an auditorium will be constructed in the Foundation's building for the use of tenants and certain other organizations.

Site to Be Acquired Soon

Following the collection of adequate funds, the next move of the Foundation would be the purchase of a lot, preferably in the University-Hospital area of Nashville, upon which the Foundation would later erect its building. The Foundation's facilities, when acquired, can be visualized as the center of medical activities related to this Association including headquarters space, a library, an auditorium, a consolidated postgraduate medical education program, and other projects in keeping with the chartered purposes of the Foundation. Certainly its opportunities for the advancement of medicine are great.

* * *

Facilities in Mining Section Found Inadequate

The medical and hospital services available to beneficiaries of the UMWA Welfare Fund came in for scorching criticism by a survey team last month. The team, composed of representatives of the Council on Medical Service, Industrial Health and Medical Education and Hospitals of the AMA, State Medical Association representatives from Tennessee, Virginia, West Virginia, Pennsylvania and Kentucky, and Area Medical Administrators of UMWA found these services in certain areas of the bituminous fields seriously substandard, inadequate and professionally incompetent.

Our Committee on the Job

Our UMWA Liaison Committee—Dr. B. M. Overholt, Knoxville, Chairman, Dr. J. S. Hall, Clinton, and Dr. Cecil Newell, Chattanooga—were on the job. The Chairman accompanied the survey team into the camps for firsthand inspection of facilities.

Another Conference Called

The findings, presently confidential and not for publication, will be the basis for another conference of the same representatives in Charleston, W. Va., on September 6-7. Our Liaison Chairman, Dr. Overholt, and the Executive Secretary will attend. Ways and means of providing adequate medical and hospital facilities within the framework of private facilities and personnel in the bituminous fields will be the burden of the conference.

Welfare Fund Administrators Restive

Unless ways are found to cooperatively do this job, it appears that the administrators of the UMWA Welfare Fund (and it's adequate) will attempt the construction of hospital facilities and the employment of personnel including physicians. This situation is a real challenge to the medical profession and you can be assured that your Liaison Committee is working hard on a real and immediate problem.

Public Service

THE TENNESSEE TEN

Public Service Committee Survey

Returns from the Public Service Committee's survey to encourage registration for voting are themselves most encouraging. Local Auxiliaries have been doing an excellent job in this drive. There are no final figures available yet, but it is safe to say that at least twice as many doctors and their wives are registered now as in the last presidential election year.

The important thing is: Now that we are registered to a high percentage, let's get-out-the-vote in all elections.

As a matter of information, this Department wishes to submit important statements of the men who have been nominated for President and Vice-President by the two major political parties in this country. These statements are submitted without comment, solely for your information during this year of crucial decision on the part of the people.

For Decent Medical Care

STATEMENT ON HEALTH INSURANCE BY GENERAL DWIGHT D. EISENHOWER
Republican Nominee for President

At his press conference in Abilene, Kansas, on June 5, 1952, General Eisenhower was asked the question: "Are you for Compulsory Health Insurance?"

Here is General Eisenhower's reply:

> "I am not going to answer too specifically, because what could be in a bill labeled compulsory health insurance? I am not so certain. But I can tell you this: I am quite certain over the years that I was at Columbia, no one spoke out more than I did against the centralization of power in Washington, against bureaucratic government and submitting our lives toward a control that would lead inevitably to socialism.....I do believe that every American has a right to decent medical care."

In discussing Federal aid to medical education, General Eisenhower said that in private universities we must "support medical education by private means, because if we didn't it would be the first step toward the socialization of medicine, and I am against socialization."

STATEMENT ON HEALTH INSURANCE BY GOVERNOR ADLAI STEVENSON OF ILLINOIS
Democratic Nomiee for President

> "I am against the socialization of the practice of medicine as much as I would be against the socialization of my own profession, the law....If the insurance principle could be brought to bear on these catastrophic illnesses, it would largely eliminate the specter of terror from the average home. ...I am sure that...the common objective can be largely realized without the destruction of professional independence.
>
> "Basically, the problem is how to lift people over the costs of major illness. I don't know whether voluntary plans can do the job. I think the new commission on medical needs may well add some light and remove some heat, enabling us to find a satisfactory solution to this perplexing problem."

*

Disagrees with Oscar Ewing

In a press conference on July 30, 1952, Governor Stevenson was asked "whether he saw eye to eye with Federal Security Administrator Oscar Ewing" on the issue of Compulsory Health Insurance.

Governor Stevenson's reply to this question was as follows:

"No, on a number of occasions in the past I have indicated that I thought a new approach was necessary. I emphatically believe that we must find some solution to the problem of catastrophic illness and its devastating expense.

"The President's Commission, of which my friend, Dr. Paul V. Magnuson is Chairman, might well come up with some recommendations and suggestions which would be more palatable, and I am hopefully awaiting the result of the deliberations."

STATEMENT ON HEALTH INSURANCE BY U. S. SENATOR RICHARD M. NIXON

Republican Nominee for Vice-President

(Excerpts from address delivered before the seventh annual meeting, Conference of Presidents and Other Officers of State Medical Associations, Atlantic City, June 10, 1951.)

"I would like...to express my congratulations to the members of this group, and to the medical profession generally, for the very splendid political action the medical profession took in the last campaign leading up to the November election, and in other previous campaigns. As a result of that action, I think we can safely say that...there is no chance whatever at this time for any type of compulsory health insurance program to be enacted....On the other hand, I think you must recognize, and that all of us who are interested in this fight must recognize, that those who favor such legislation will continue to work fanatically for their cause, in the hope that somehow, sometime in the future, they will be able to accomplish their purpose."

"I think...that a great number of people, probably a majority of the people in the country, are convinced that the compulsory health insurance programs which sound so good in theory have not worked out in action in those nations which have tried them."

Should Be Voluntary

"I am convinced that the medical profession has taken a very long step in the right direction with its recently announced program of subsidizing medical schools on a voluntary rather than on a government basis. I would suggest also that additional voluntary action is needed (in dealing with) the problem of encouraging wherever possible voluntary health insurance programs. It seems to me that the objective toward which we should work in the United States is a system where eventually anybody who wants health insurance can get it—where those who should have health insurance are encouraged to get it—but where no one in the United States is compelled to take out such insurance against his will. If the profession adopts that objective, we will remove by voluntary action the strongest arguments that the proponents of government control of the medical profession have at the present time."

"I believe it is essential that all members of the medical profession recognize that an attempt to socialize any American profession—any American institution—constitutes a threat to all."

"Traditionally, the great accomplishments in this country have not been through government action, but through individual and cooperative action....(Our task) is by precept and by example, to prove to the people of the world that a free people, working as individuals, working cooperatively, can solve the problems of our society and can solve them more effectively than can a government."

STATEMENT ON HEALTH INSURANCE BY U. S. SENATOR JOHN J. SPARKMAN

Democratic Nominee for Vice-President

"I am in favor of adequate medical attention for the people of this country. However, I have not favored what is generally known as Socialized Medicine.

Opposes Any Wedge

"I would be opposed to any plan which I thought would, in effect, socialize medicine, and to any medical program which would destroy the relationship of doctor and patient."

The foregoing statement was made by Senator Sparkman in an interview with Mr. Al Goldsmith, editor of Washington Insurance Newsletter, on July 31, 1952.

Washington Insurance Newsletter reported that Senator Sparkman strongly indicated he was opposed to the Truman National Compulsory Health Insurance Program, but declined to take a position on specific bills now before The Congress.

In 1949, when the roll was called in the U. S. Senate on President Truman's Reorganization Plan No. 1, which would have created a Department of Welfare, Senator Sparkman stood with medicine in opposition to this scheme to give Federal Security Administrator Oscar Ewing cabinet status, with increased power over the health and medical affairs of the country.

From the Executive Secretary

ORGANIZATIONAL NEWS

TAGP Directors Adopt Projects

The fast growing Tennessee Academy of General Practice has been given a strong impetus by a recent meeting of its Board of Directors.

The Directors shaped and approved a solidly constructive program for the current year.

Those Attending

Doctor C. B. Roberts of Sparta, President of TAGP, presided over the all-day Sunday session. Directors, Alternates, Committee Chairmen and guests present were: Drs. James P. Anderson, D. J. Johns, Daugh W. Smith of Nashville; E. L. Caudill, Jr., Elizabethton; L. A. Killeffer, Harriman; W. K. Owen, Pulaski; Paul Williamson, Memphis; Julian K. Welch, Brownsville and W. A. Hensley of Cookeville.

To Expand Annual Meeting

The Directors first voted to expand their Annual Session, held in conjunction with the TSMA Annual Meeting, into a two-day affair. On Sunday, April 12, the Memphis Chapter of TAGP will present a clinical demonstration of the work being done by the GP Clinic established at the University of Tennessee Medical School last year. Doctor Paul Williamson and Dr. D. H. James of Memphis will plan and conduct this demonstration, open to all members of the TSMA.

On Monday evening, the GP Academy will have its usual program, consisting of a dinner, a nationally known speaker, installation of President-Elect Killeffer, election of new officers and business session.

Will Sponsor News Column

The Academy also voted to finance and sponsor a weekly newspaper column, circulating medical news of interest to laymen. The column will be prepared by the Public Service Committee of the Academy, headed by Dr. Killeffer.

President Smith Commends GPs

Doctor Smith, President of the Tennessee State Medical Association, was asked to speak to the Directors, and he had this to say: "There is no group that has the grip on the American public that the medical profession has, and of the medical profession the group that has its finger on the pulse is the group known as the 'GP' or 'family physician', because when the family gets in trouble, the family physician is the first person they think of, and the preacher second. . . . I hope the day will never come when you will lose that grip, but that it will ever grow with you."

Requests Support of Tennessee Plan

Doctor Smith also urged the Directors to appeal to their members for signatures committing them to participation in the expanding and liberalized Tennessee Plan of Voluntary Health Insurance. He said his experience revealed that the public was pleased to know that physicians sponsored such a plan. He referred to a series of meetings he has had with organized Labor leaders, and quoted one of them as saying: "Our doctors are next to our ministers and we definitely don't intend to stand by and see anything come between us and our doctors."

Ask for Space in The Journal

Another project approved by the Directors is to request space for a monthly Newsletter, to be inserted in the Journal of the TSMA. This Newsletter will report activities of the State Academy and its three component chapters in Chattanooga, Memphis and Nashville.

Special Services From U-T

Doctor Williamson reported that the University of Tennessee Medical School is offering individual courses to GP's who act as residents for two or three weeks. Although only a few such courses have been offered so far, the response has been excellent, and this type of Post Graduate Education will be further explored.

He also mentioned the audio-visual program at UT, commenting that generally the films available are largely of the "show off" variety, and do not show step-by-step how to follow the procedure in your own office. UT has begun making color films to illustrate a step-by-step procedure, and is trying to get such films cleared for post graduate credit.

Another project mentioned by Dr. Williamson was the recording of clinics, produced in a radio studio from a prepared script, so that they would "sound good". These have been tried out on twenty-five or thirty doctors, who expressed a great deal of interest. These recordings are prepared particularly with the problems of rural doctors in mind.

GP Chapter For Knoxville?

Doctor Joe L. Raulston of Fountain City has been asked to explore the possibility of organizing a GP Chapter in Knoxville for the Upper East Tennessee area.

The TAGP has joined the Knoxville Academy of Medicine in official sponsorship of a one-day Post Graduate Clinical Demonstration at Knoxville on November 14. The Clinical Demonstration (strictly non-commercial) will be conducted and financed by Lederle Laboratories. The social functions will include a luncheon in Knoxville and a dinner in Gatlinburg. Physicians' wives are invited to the dinner.

Second Appeal for Signatures

A second appeal for signatures of physicians who want to join the Tennessee Plan has gone out from the office of the Executive Secretary.

At press time, slightly over twelve hundred physicians have signed the card to participate in the expanded and liberalized Plan.

Enrollment Under Tennessee Plan To Increase

The new Plan will bring in many more Tennesseans, because the income limits have been boosted from $3,600 a year (total family income) to $4,200 a year. This increase is designed to keep pace with the rising cost of living.

In his "President's Page" in last month's Journal, Dr. Daugh W. Smith made this appeal: "It is quite evident that whatever the solution may be, to the financing of health protection, it must emerge from the states; from State Medical Associations with their local Societies supporting the programs and actively, fully participating in them.

"That being true, shall we in Tennessee solve this problem by establishing a formal program and pattern of voluntary health insurance? Or shall we fail to exert the leadership and let the problem be solved elsewhere? And you know where! If we elect the latter course, then we must prepare ourselves to accept the consequences without recourse."

UMW Liaison Committee Is On the Job

The Association's Committee on Liaison with the United Mine Workers of America has been very active in recent months tackling a vital problem.

The Committee is seeking a solution for the problem of medical care needs in a coal mine valley of Upper East Tennessee. This section, known as Pruden, or Little Fork Valley, has eighteen thousand persons, mostly coal miners, who are badly in need of clinic facilities. The Committee, composed of Dr. B. M. Overholt, Knoxville, Chairman; Dr. Cecil E. Newell, Chattanooga, and Dr. J. S. Hall, Clinton, held its latest meeting in Nashville with Dr. Daugh W. Smith, Dr. R. H. Kampmeier, Dr. R. H. Hutcheson and Ed L. Bridges.

Mr. L. W. Kibler Passes Suddenly

Tennessee physicians felt a deep sense of loss at the sudden death of Mr. L. W. Kibler, who served for fifteen years as Field Director for the Post Graduate Medical Program sponsored by the TSMA and other organizations.

Mr. Kibler, who was 63, died of a heart attack at his home in Memphis August 22.

Last January Mr. Kibler was appointed Director of the Post Graduate Department of the University of Tennessee Medical School. He recently gave up his duties with the State Association's Post Graduate Committee last month, to devote full time to the new job.

Public Service

THE TENNESSEE TEN

Reliable information obtained by your Public Service Director in Chicago (September 2) indicates that:

1. Priority doctors in classification No. 1 will be called in moderate numbers between now and January 1, 1953.

2. Doctors in priority classification No. 2 will be called in fewer numbers between January 1st and April 1st of next year.

3. Doctors in priority classification No. 3 will not be called before next June or July, and if they are not called before June 30th, they will not be called at all under the present law, because it expires at that date.

Doctors and The Press

Newspaper men of Tennessee agree that our physicians generally are usually very cooperative in giving statements to the press in cases where they do not violate the privacy of the patient and do not violate any ethical principles.

It seems that this situation does not hold true in the State of Oregon. The Portland Bureau of the Associated Press made a survey recently to determine the biggest news barriers in the state of Oregon.

The survey covered federal offices, the FBI, the state house, peace officers, city, county and school offices, the Armed Services, and hospitals and physicians. In the final report, abstracted in Editor & Publisher, doctors and hospitals were rated the biggest news barriers. "This is the biggest news barrier," the report said. "It is the one found just about everywhere throughout the state of Oregon."

Newsmen's comments selected at random:

"There are only two sources with which I have trouble. One is the hospital."

"We have the most trouble with doctors. They are about our only complaint."

"We have very poor relations with hospitals. Doctors are the greatest news barriers in this city."

The same issue of Editor & Publisher reported on a Philadelphia television panel which discussed the doctor's code in dealing with the press. It quoted one of the participants as stating: "The doctor's code is static, rigid and so hopelessly rooted in the past that it's completely obsolete."

Dr. Owen Speaks on GP Group

The Directors of the Tennessee Academy of General Practice requested one of their Board members, Dr. Wm. K. Owen of Pulaski, to write a statement for publication in this section concerning growth and plans of the Tennessee Academy of General Practice. Doctor Owen's statement follows:

"Approximately five years ago the American Academy of General Practice was organized and approximately one year later your Tennessee Academy of General Practice began as a separate entity from the TSMA. In the State of Tennessee there are approximately 1,400 general Practitioners of a total membership of 2,100 in the TSMA. However, the State Medical Association is not able to do the job which the TAGP is attempting to do. Please let it be understood that there is no conflict between the two organizations.

"I am sure that if general practitioners who have not yet joined the TAGP understood and realized fully the scope and possibilities of the general practitioners' organization, there would be a very rapid increase in enrollment. The AAGP was organized with the sole purpose of improving the standards of the education of the General Practitioners without any idea of interfering with, or assuming, the work of any other medical organization.

"Although it is not apparent to the individual member of the TAGP, a great deal of work has been done in laying a good foundation for the general practitioners of the State of Tennessee. This foundation work is on the verge of blossoming into what may be the most significant advance in Post-Graduate Medical Education in the United States.

"Let us not be weary of the fight but continue to be one of the best groups of practitioners in the United States, as is apparently our good fortune at the moment."

Nurse Education Is Expanded

Nursing Education, just as medical education, is always changing to keep pace with the changing world of medical care.

Two years ago, the Tennessee General Assembly created a State Board of Nursing which has issued numerous licenses to Practical Nurses. The Licensed Practical Nurses' Association of Tennessee has been organized. Mrs. Mary Denniston, President of the Nashville Area of the Licensed Practical Nurses' Association, has requested that we give the following message to members of the Tennessee State Medical Association. Mrs. Denniston writes:

"The trained Licensed Practical Nurse would like for doctors and the general public to know more about our program.

Training Is Outlined

"We are given three months classroom instructions in nursing care, procedures, and ethics, mostly ethics; by a well qualified R.N. Instructor. Then, we receive nine months of hospital training, consisting of two months surgical, two months medical, one month each of pediatrics and obstetrics, and three months general or special training.

"We can care for the aged, convalescent, chronically ill, mother and child, home nursing, and work in hospitals under supervision. We can care for the critically ill under the supervision of an R.N. or a Doctor. We can and do adjust ourselves to most any environment. We are ready for more fields of service.

"Every L.P.N. who has satisfactorily completed her training is now working. We need more students, but we want the doctors to know we take orders from an R.N. when in a hospital, and from doctors when working directly with or for them. We are trained to do good bedside nursing care and obey orders."

At the Knoxville Annual Session, the Memphis delegation obtained adoption of a resolution favoring a two-year course in nursing education. At least one nursing school in the State is now studying the possibilities of establishing such a course. Columbia University already is conducting such a course as a national pilot test. That experiment is being watched closely by those interested in nursing education and the production of more nurses.

From the Executive Secretary

ORGANIZATIONAL NEWS

Board of Trustees Meeting Called

The Board of Trustees will hold its regular semiannual session in Nashville on November 2 at the Association headquarters—325 Doctors Building. The Board will have a heavy agenda including a review of a financial statement for the first nine months of this year, and the adoption of a budget for 1953. The Board is an interim policymaking body, and within the authorizations of the House of Delegates, will plan the course of the Association's affairs for next year. In addition to fiscal matters, the Board will appoint committeemen to fill vacancies, elect a successor to the late Dr. Kyle Copenhaver, Councilor of the First District and Chairman of the Council, act on recommendations affecting the *Journal,* review the operations of the headquarters office, and give general direction to the Association's activities for the next six months. A detailed, but synoptic report of the Board's actions will be reported in this section next month.

Executive Secretary Testifies Before President's Commission

Upon request of Dr. Paul Magnuson, Chairman of the President's Commission on the Health Needs of the Nation, your Executive Secretary testified before the Commission in Saint Louis on September 15. The Commission is holding area hearings all over the nation for the purpose of collecting data and information to be used in compiling its report this December. The testimony covered six areas of major interest to the Commission: (1) health personnel, (2) adequacy of local public health units, (3) medical research, (4) hospitals, (5) costs of medical care and prepaid insurance, (6) a review of federal, state and local health programs. It was a big assignment, and was undertaken for two reasons: (1) to furnish the Commission with authoritative information, and (2) to avoid the criticism that medical societies defaulted and were not cooperative.

Your Executive Secretary is particularly indebted to the following people who supplied invaluable information on a very short notice for inclusion in the testimony: Dr. O. W. Hyman, Dean of UT Medical School; Dr. R. H. Hutcheson, Commissioner of Public Health; Dr. John B. Youmans, Dean, Vanderbilt School of Medicine; Dr. C. E. Brehm, President, University of Tennessee; Dr. Ruth Puffer, Department of Public Health, and many others.

UMWA Liaison Committee at Work

The UMWA Liaison Committee composed of Dr. B. F. Overholt, Knoxville, Chairman, Dr. Cecil Newell, Chattanooga, and Dr. J. S. Hall, Clinton, has moved rapidly toward the solution of a serious medical care problem in a section of the coal-mining area of East Tennessee. Earlier, the Committee participated in a survey of the medical care facilities of the area in cooperation with the AMA and the UMWA Health and Retirement Fund representatives. Following the receipt of a confidential report of the Survey Committee, our Liaison Committee, with first-hand knowledge of the situation, is planning a practical solution.

Miners' Medical Care Conference Held

Dr. Overholt and your Executive Secretary attended a conference of representatives of the AMA, the Directors of the UMWA Fund, state medical association UMWA committees, and state medical association officers in Charleston, W. Va., on September 6-7. At this two-day conference the medical care problems in the mine areas of Pennsylvania, Kentucky, West Virginia, Virginia, and Tennessee were reviewed. The UMWA's program including the construction of ten proposed hospitals was discussed and representatives of state medical associations were invited to propose their solutions. To the credit of the profession, representatives of medical associations were constructive in their views and a mutual understanding of the problem was one result of the conference. Tennessee, and Dr. Overholt's committee in particular, was commended for the practical solution of Tennessee's share of the problem. The Tennessee project is still in the planning stage, but subsequent action will carry it to conclusion—a project of which Tennessee physicians can well be proud. The conference will be made an annual affair.

Tennessee Plan Revision Progressing

The revision of the Tennessee Plan is going along smoothly. So far, not a single underwriter has indicated that they are not cooperating. Doctors are cooperating, too. More than 1,600 Tennessee physicians have signed and returned new participating agreements. The principal aspects of the revision are as follows: (1) All of the thirty-three underwriters will substitute the Revised Fee Schedule in all policies after October 1, 1952. (The new schedule has a $200.00 maximum benefit; the old Tennessee Plan schedule was a $175.00 maximum benefit.) (2) Underwriters have agreed to not sell any more of the $175.00 contracts to new accounts, and have also agreed to substitute the revised schedule at the annual renewal date for the old schedule. (3) Substitution of the revised schedule on anniversary dates of present contracts will continue until October, 1953. It is anticipated that practically all old plans will thus be converted within one year. (4) Participating doctors will continue to service the old Tennessee Plan ($175.00 schedule) so long as any contracts are outstanding.

More Participating Doctors Needed

WE NEED MORE PARTICIPATING AGREEMENTS! It is hoped that by the time the first list under the revised schedule is printed, that we will have 1,800. Doctors desiring to sign the new agreement should do so at once in order that their names can be included.

A New Headquarters Service

Your headquarters office is improving its placement service—a method of "getting doctors and communities together." During the past week, Mr. Eugene Dye from the AMA's Council on Medical Service, spent two days with your Executive Secretary and supervised the modification of this service.

"Getting Doctors and Communities Together"

Here's the new plan. The service will be without cost and is designed to assist the following: (1) doctors seeking a location, (2) communities seeking a doctor, and (3) doctors seeking an associate or parner. Basic information will be secured by questionnaires. When a community asks for the service, a questionnaire will be mailed to the person, or a civic leader or club requesting detailed information about the community—the kind of information any doctor would want before considering the location. When a doctor writes in stating that he is interested in locating in Tennessee, he will be mailed a questionnaire which will give us important information about him—personal history, medical training, type of practice interested in, and preferences of location. When a doctor desires an associate or partner, he will be supplied with detailed information about all doctors currently seeking a location.

A brief abstract of community information and information about doctors desiring a location will be carried each month in the Journal, each with a reference number. Communities and doctors will be able to secure detailed information by writing the Executive Secretary's office. It is expected that some communities may seek a doctor or doctors when in reality no need exists. In order to have competent advice on a community's need for a doctor, THE LOCAL MEDICAL SOCIETY will be queried on the community's need. Although this service cannot and should not take the place of local inspection, it should assist doctors and communities in "getting on the right track" with a saving of time and effort to both.

Executive Subcommitteeman on Tennessee Plan Appointed

Dr. John R. Glover, Nashville orthopedic surgeon, has been appointed to the Executive Subcommittee of the Association's Prepaid Insurance Committee by Chairman N. S. Shofner, M.D. The Executive Subcommittee is composed of Drs. Glover, D. W. Smith, R. H. Kampmeier, N. S. Shofner, and Mr. Charles Cornelius, Sr. This Committee is charged with making administrative decisions affecting the operation of the Tennessee Plan.

Public Service

THE TENNESSEE TEN

Doctor Roy L. McDonald, Co-Chairman of the Public Service Committee of the Knoxville Academy of Medicine, sent me an excellent "prescription," which in my opinion will cure the cancer in the body politic. On one of his prescription blanks he pasted the following news item:

> ### NOW WILL YOU VOTE?
>
> NEW YORK, October 2 (INS)—The Greeks had a word for it!
>
> The word was "idiotes" meaning citizens who did not take part in public voting. The English "Idiot" stems from it.

The medical profession in Tennessee, thanks to the excellent assistance of the State and Local Auxiliaries, is now registered to vote in the November 4 election to an average percentage of ninety to ninety-five. Follow-up checks indicate that some ninety to one-hundred per cent of those registered actually voted in the August 7 Primary, despite the handicap of standing in line from three to four hours at some understaffed polling places in the larger cities. Specific efforts have been made to relieve this situation.

Like the Harvest Moon, the fair season is sweeping across the country, and several medical societies in Tennessee took advantage of the season to tell medicine's story to several hundred thousand persons.

The Knoxville Academy of Medicine went all-out again with a comprehensive and attractive booth featuring several items.

Health movies were projected throughout each of the six days of the TVA&I exposition. This always results in the placement of such movies in many East Tennessee Schools throughout the coming term.

A new and highly useful section of the booth was devoted to first aid. This section was staffed by an intern and a nurse at all times, and equipped with medicine, instruments and a snow-white cot. Patients treated there (for free of course) included those suffering from a heart condition, a perforated ulcer, a broken ankle, a broken knee, two burn cases, one poison insect sting and six cases of "ferris wheel" nausea.

Literature distributed included an excellent pamphlet by AMA titled "Your Money's Worth in Health," several thousand copies of "Today's Health," thousands of copies of "The Tennessee Plan" pamphlets. A skeleton borrowed from Jack Massey proved to be an excellent educational item for the booth.

For the first time, the Academy permitted your Public Service Director to stage actual demonstrations on the use of the electrocardiograph. Three Academy members demonstrated the cardiograph on "patients" and the response was excellent. Following these demonstrations (also for the first time), color movies of complicated heart surgery performed in Knoxville were shown to the public. Contrary to predictions, only a half-dozen persons out of 300 turned away from the movies.

The main purpose of the EKG demonstration was to deemphasize the "gadget-mindedness" of the public and to show that the important factors in diagnosis are found in the head and the hands, the skill and the training of the physician—not in a machine.

A closely estimated forty-nine thousand persons visited the Knoxville Academy of Medicine fair booth.

Jack Ballentine reports in the Medical Newsletter on the State Fair booth of the Nashville Academy of Medicine as follows:

"The Medical Exhibit for the education of the public at the state fair was extremely successful. Nine thousand copies of "Today's Health", six thousand copies of "Your Money's Worth in Health", six thousand copies of "A Doctor For You", and five thousand five hundred copies of the pamphlet explaining the Tennessee Plan of Insurance were distributed. An estimated 85,000 persons viewed the exhibit. Assisting in manning the booth were representatives of the nurses association. As a part of, and in keeping with the Academy's Public Service Program, prospective people were interviewed that showed interest in entering the nursing profession. It was estimated that some 200 to 300 people were given detailed information and urged to enter nursing work."

Health Agencies of Putnam County entered the fair exhibit field for the first time and found it a most worthwhile venture.

A deserved bouquet must be tossed to Mr. Elmer L. Crozier, Administrator of the Cookeville General Hospital who acted as coordinator, announcer and Generalissimo of the combined exhibits arranged in a rented tent at an advantageous spot on the fair ground.

Exhibits in tent were shown by the Putnam County Medical Society, Cookeville General Hospital, Red Cross Local Chapter, Polio Local Chapter, Tennessee Hospital Service Association and local Health Department. The exhibits also included a first aid station. A large banner over the tent announced free health movies and free ice water. Both of these proved to be "crowd-swarming" attractions. It was estimated that approximately 15,000 persons came through the tent during the three days of the fair.

The Putnam County Medical Auxiliary and the Cookeville Jaycetts acted as hostess to the public, distributing literature and answering questions. A health questionnaire brought in 416 completed forms.

I wish every member of the Tennessee State Medical Association could have attended the Fall Meeting and Dinner and Board of Directors meeting of the State Woman's Auxiliary.

It was stimulating to notice the interest doctors' wives, in positions of leadership, are showing in our fight to extend medical care.

The various Committee Chairmen, Directors, Vice-Presidents, Officers and Local Auxiliary Presidents made solid suggestions for programs and projects which will redound to the benefit of every Tennessean in need of medical care.

Your Public Relations Department is proud of its affiliation with the Woman's Auxiliary. We wish to herewith make a full bow to Mrs. Jewel Dorris of Memphis, highly capable and dynamic President of the State Auxiliary for the current year.

From the Executive Secretary

ORGANIZATIONAL NEWS

Semiannual Meeting, Board of Trustees

The Board of Trustees held its regular semiannual meeting on November 2 at the Association's headquarters in Nashville, convening at 10:00 a.m. and adjourning at 4 p.m. Those present were: Chairman James C. Gardner, Charles C. Trabue IV, E. G. Kelly, and A. M. Patterson. Absent, Carrol C. Turner. Others present were President Daugh W. Smith, Editor R. H. Kampmeier, Public Service Director Ed Bridges, and Executive Secretary V. O. Foster. Assisting the Board by taking minutes and handling arrangements were staff members Peggy Odell and Margaret Rawls.

Committee Chairmen Appear Before Board

By request, two chairmen of Association Committees appeared before the Board to review their respective Committee's recent actions and to request further instruction and assistance. They were Dr. H. H. Shoulders, Chairman of the Veterans Affairs Committee, and Dr. B. M. Overholt, Chairman of the UMWA Liaison Committee. Dr. Shoulders stated that the Tennessee Resolution on the Hospital and Medical Care of Veterans was now under review by a special reference committee of the AMA, and revealed plans for working for the adoption of the "Tennessee Resolution" at the December session of the AMA in Denver.

UMWA Liaison Committee Commended and Expanded

Dr. Overholt reviewed his Committee's activities directed toward improvement of medical care in the Pruden Valley mining area. Following up a confidential report of a national survey committee on conditions in the mining fields, the UMWA Liaison Committee has been very active in finding solutions. Pointing out the difficult problems ahead, Dr. Overholt proposed four actions which were approved by the Board: 1) Increasing substantially the membership of the Liaison Committee (3 members) to include representatives of medical schools, state health department, one member of the Board of Trustees, and representatives of other agencies with an interest in the problem; 2) Devise methods of providing consultant services to general practitioners in the area; 3) Expanding general practitioner services in the area; and 4) Promoting the construction of an adequate clinical facility. The Board commended Dr. Overholt for his Committee's constructive actions, authorized him the expansion of his committee, and requested that he report back with specific proposals for the solution of the problem.

Detailed Financial Statements Submitted

The Executive Secretary presented the Board with a detailed financial statement covering the first three quarters of the budget year, a statement of fund balances, a statement of the operation of the Public Service Department, and a proposed budget for 1953. The financial reports were approved. A significant fact about the financial report was that 96% of our anticipated revenue for the year had been received and only 70% of appropriated funds had been expended during the three fiscal quarters.

1953 Budget Adopted

The budget, as adopted for 1953, is $500.00 less than the 1952 budget. It also follows instructions of the House of Delegates in that it contains specific appropriations for the Public Service Department. The 1953 budget is as follows:

Budgetary Provisions

BUDGET, 1953

ESTIMATED BALANCE ON HAND—JANUARY 1, 1953	$ 5,000.00
ESTIMATED RECEIPTS:	
Dues	48,500.00
Journal Advertising	16,000.00
Exhibit Rentals	6,000.00
Miscellaneous	500.00
TOTAL	$76,000.00

APPROPRIATIONS:

	General Fund	Public Service	Total
Journal Expense	$14,000.00		$14,000.00
Salaries	14,100.00	$10,200.00	24,300.00
Travel Expense	1,000.00	2,000.00	3,000.00
Rent	1,512.00	1,008.00	2,520.00
Telephone and Telegraph, Messenger Service	360.00	1,440.00	1,800.00
Printing, Stationery, Supplies	800.00	2,400.00	3,200.00
Clipping Service	150.00		150.00
Audit	200.00		200.00
Editor's Honorarium and Clerk Hire	3,600.00		3,600.00
Committee Expense	800.00	200.00	1,000.00
Board of Trustees	500.00		500.00
AMA Delegates, Other Officers	1,000.00		1,000.00
Annual Meeting	4,500.00	500.00	5,000.00
Attorney's Fees	1,000.00	1,500.00	2,500.00
Essay Contest		500.00	500.00
Post Graduate Instruction	10,000.00		10,000.00
Replacement and New Equipment	250.00	250.00	500.00
AMA General Practitioner Award	100.00		100.00
Contingency Fund (Unappropriated)	2,130.00		2,130.00
TOTALS:	$56,002.00	$19,998.00	$76,000.00

Mail Votes Confirmed

In order to expedite action between meetings of the Board, mail votes are often taken. Mail Votes confirmed were:

1) Appointment of Physical Therapy Committee – Dr. George W. Shelton, Chattanooga, Dr. S. Ben Fowler, Nashville, and Dr. Marcus Stewart, Memphis.

2) Supplemental appropriation of $200.00 for Committee on Veterans Affairs.

3) Providing space for GPs in the Journal (provided space is paid for and copy edited by the Editor).

4) Transferring Building Fund Account to the Tennessee Medical Foundation.

5) Place and time of semi-annual meeting (Nashville, November 2).

6) Accepting alcoholic institutional advertising for the Journal.

7) Approval of the budget for the Public Service Department.

All Specialty Groups Invited to Meet Concurrently With Association

The matter of inviting all specialty groups to meet concurrently with the State Association's annual meeting had been submitted by mail vote, but decision was deferred until the regular session. Since the matter of the specialty scientific programs would need to be correlated with the scientific programs of the Association's general sessions, Dr. Kampmeier as program chairman reported that he had polled his committee on the subject. The committee voted almost unanimously to approve a proposal that:

Important Changes in Annual Meeting

1) The House of Delegates meet on Monday (No scientific sessions, either general or specialty).

2) That general sessions (Association) be held on the MORNINGS of Tuesday, Wednesday and Thursday.

3) That specialty scientific sessions be held in the AFTERNOONS of Tuesday, Wednesday, and Thursday.

Upon thorough discussion, the above proposal was adopted by the Board and the Executive Secretary was instructed to inform all specialty societies of the action.

Dr. Rawlston New Second District Councilor

Dr. Joe L. Raulston was appointed by the Board to fill out the term of Dr. Kyle Copenhaver (deceased) as Councilor of the Second District. The office will be subject to election by the House of Delegates at the next session. Dr. D. W. Seward, Nashville Councilor of the Sixth District was named Chairman Pro Tem of the Council, pending its organization at the annual meeting.

Public Service

THE TENNESSEE TEN

PS Project Gets National Attention

The Public Service Committee of the TSMA pioneered in the development of a project under which Public Relations Courses have been given to more than 1,000 Doctors' Assistants.

The current classes will end in November and December in two more areas, one in Johnson City and the other in Sparta. These two cover some 23 counties. They have been well-attended and the young women enrolled have shown deep interest in their jobs and in their employer-doctors. They face some real problems in dealing with the stream of humanity which flows through doctors' offices, hospitals and laboratories. The PS Committee hopes that these courses have been of benefit to the young women. If they have, then they will benefit our doctors.

Because this is the first such project in the nation, it has been closely watched by the American Medical Association, and by the other State Medical Associations.

The AMA thinks enough of it to use the Tennessee Pattern as the keynote kickoff at the annual Public Relations Program to be held in Denver in connection with the Interim Session of the AMA. Your Committee appreciates that recognition and hopes that this project spreads throughout the nation.

Another Project Is Acclaimed

Tennessee is recognized a second time on the December meeting in Denver. Dr. Richard O. Cannon, Administrator of Vanderbilt Hospital, is a panelist on a portion of the PR session devoted to hospitals, doctors and public relations.

Dr. Cannon will discuss the Press and Radio Code developed and effectuated by the Nashville Academy of Medicine. Under this Code, doctors, hospitals and the press and radio of Nashville are working closely together for the mutual benefit of both. As a result, the public is better informed—yet the privacy of the patient is strongly protected.

Another Nashville Academy project—the institution of a Grievance Committee for public use—was recently publicized in the Magazine section of the Nashville Tennessean. More and more local societies in the State are developing, or activating their Grievance Committees.

Reaction from the people seems to be that they appreciate having a private forum before which they may air their complaints. One patient's reaction was summed up like this: a profession which regulates its members deserves NO regimentation by the government.

"Hair Down" Meeting Planned for Jackson

Last May, the PS Committee voted to urge the 48 local societies to devote at least one meeting each year to Medical Ethics. It was suggested that the meetings be "hair down" sessions, with speakers pointing the finger at violations of the ethical code which constantly bring criticisms down on the profession.

The Memphis and Nashville Societies have held such meetings. In both cases, the criticism was invited from outsiders and both meetings were hailed as a success.

Now the West Tennessee Consolidated Medical Assembly is planning a "family affair" session on Medical Ethics for the January 6 meeting in Jackson. First, three M.D. speakers from outside the 15-county Assembly will discuss these topics:

They Got Out The Votes on November 4th

I. Abuses of Hospitalization Insurance by the Doctor, the Patient, the Insurance Company, and the Hospital.

II. Unnecessary Surgery.

III. Medico-Legal Problems Facing Tennessee Doctors.

Then, a question and answer period will follow. With such topics as these, this question and answer period should be a lively one.

The speakers will be announced in the next Journal.

Thanks to the State and Local Woman's Auxiliaries the PS Committee prospect of obtaining registration, and voting, by doctors' families was a heartening success. Of course nobody knows yet how many doctors and their wives did vote November 4, but a safe "guesstimate" would be betten than 90 per cent.

The local Auxiliaries set up telephone and courthouse committees. They contacted doctors and their wives by telephone and urged them to register and vote. Then they checked courthouse registration rolls. Then they contacted some more. There was NO heckling about, just a firm but polite insistence that the medical families exercise one of the freedoms they have left—the right to vote without someone in the booth with you, telling you say "Ja!"

Dr. L. W. Edwards, Committee Chairman, has written the Auxiliary Presidents thanking them for the superb job the distaff side turned in on this important project.

One Nashville doctor is credited with a neat wisecrack on election day. He was far back in the line and his arches were suffering. A fellow doctor who had voted spotted him and said cheerfully: "Well, I see you're exercising your franchise."

The retort was: "No, my franchise is exercising me!"

Another Vote Reminder Item

Public Service in the get-out-the-vote campaign took still another form. The Committee distributed 80,000 free napkins to hotels, large and small restaurants and clubs throughout the State. These were mealtime reminders to Tennesseans some two weeks before the election.

The white napkins carried red and blue printed messages on two sides. One message reminded the people of the small—51 per cent—number of Americans who voted in the 1948 General Election. The other message showed the relatively large percentage of people who voted in foreign countries.

Here is a sample letter from one of the public spirited citizens who cooperated in this project by distributing the napkins:

"Mr. Ed Bridges
Public Service Director
Tennessee State Medical Association
Nashville 3, Tennessee
Dear Mr. Bridges:

You were very kind to send us the two packages of napkins. We are using these to our best advantage and hope that it will result in getting out a bigger vote during the coming election. The Tennessee State Medical Association is to be congratulated on the fine civic spirit as witnessed by their effort in getting out these napkins.

With kindest regards, I am
Sincerely yours,
J. Garnett Andrews
Manager, Patten Hotel
Chattanooga, Tenn."

From the Executive Secretary

ORGANIZATIONAL NEWS

1,700 Physicians Sign Revised Tennessee Plan

New Booklet Available

Almost 1,700 physicians have signed participating agreements to service the Revised Tennessee Plan. Thirty-one insurance companies and non-profit associations have submitted policies which have been approved, incorporating the revised fee schedule. New brochures describing the Revised Plan are now available from this office. A copy of the brochure which lists participating physicians, approved underwriters, the revised fee schedule and questions and answers about the Plan, along with 50 copies of a little folder for your patients to read will be mailed all participating physicians shortly.

Newspaper Advertising to Tell Public About Plan

During January, a paid newspaper advertising program will be used to tell the public about the new Tennessee Plan. An attractive ad will run in every newspaper in Tennessee. Underwriters have been invited to purchase "follow-up" advertising to indicate that they sell the Plan. Local medical societies may also purchase space telling the local community that the medical society endorses the Tennessee Plan and that a majority of its members (100% in many cases) are participating in the Plan.

Costs Defrayed from Promotional Fund

The Association's master ad will be paid for out of the Promotional Fund which was voluntarily subscribed by our approved underwriters. Approximately $3,800.00 of this fund will be required. Now that the Revision of the Plan is completed, a rapid rise in sales is expected. More than 400,000 are already insured under the Plan.

AMA Regional Legislative Conference Held

TSMA's Representatives

The Association was represented at a Regional meeting on national legislative matters in Memphis on November 23. The conference was sponsored by the Washington office of the AMA and conducted by Dr. Frank Wilson, Director of the Washington office. States represented were Tennessee, Arkansas, Mississippi, and Kentucky. Tennessee was represented by Dr. C. M. Hamilton, Chairman, TSMA's Legislative Committee, Secretary-Editor R. H. Kampmeier, Ed Bridges, Public Service Director, Executive Secretary V. O. Foster, Dr. W. C. Chaney, AMA delegate, and Bob Bird, Executive Secretary of the Memphis-Shelby County Medical Society.

Purposes of the Conference

The agenda included an outline of the functions and activities of the AMA Washington Office, an explanation of the Office's publications, a description of the office's procedures, an explanation of the work of the AMA's Committee on Legislation, a summary of important bills before the last Congress, trends and expected medical legislation ahead, and a roll call of the present members of the Congress from the four states. Specific legislation discussed was the Reed-Keogh Bill (Professional Retirement) Doctor Draft legislation and HR 7,800 (amendments to Social Security Act).

Annual Meeting April 13-14-15-16

It's not too early to make your hotel reservation for the Annual Meeting next April. Headquarters will be the Peabody Hotel. Date—April 13-14-15-16. Tennessee Hotel is just across the street from Peabody where additional rooms are available. Make your reservations directly with the hotel.

Important Changes in Meeting

Important changes in the Annual Meeting have been made. 1) The House of Delegates will meet all day Monday with no scientific sessions. 2) Monday night has been reserved for annual business sessions and banquets of all specialty groups. 3) General sessions of the Association will be held during the MORNINGS of Tuesday, Wednesday and Thursday. 4) Afternoons of Tuesday, Wednesday and Thursday will be given over to scientific programs of all specialty groups.

President's Night and Fun Night Scheduled

Tuesday night will be "President's night," and Wednesday night will be Fun Night. All specialty groups are requested not to schedule any activities on these nights. Dr. Kampmeier, Chairman of the Scientific Program Committee, has written all specialty societies advising them of these changes and requesting their cooperation. These changes, approved by the Board of Trustees, are expected to improve the attendance at the general sessions and the specialty sections. Officers of the specialty groups are requested to cooperate with Dr. Kampmeier on planning their scientific programs and with the Executive Secretary who will arrange for meeting places and facilities for the specialty groups. Attendance has increased at the State meeting for the past two years, and the next year should be still larger. Be sure to put a ring around April 13-14-15-16 on your calendar now.

Specialty Groups to Cooperate

Full Attendance Difficult for Home Town Physicians

Registration and attendance records will depend largely on Memphis physicians. We know how difficult it is for a physician in his "home town" to support the Annual Meeting every day. Patients expect the doctor to be available—meeting or no. Thus if a great majority of Memphis physicians are to register, special facilities must be made.

Special Registration for Memphis Physicians

The Association will conduct an ADVANCE registration just for the convenience of Memphis men. The general registration desk will be open on Sunday, April 12, from 1:00 to 5:00 p.m. on the mezzanine floor of the Peabody Hotel. All Memphis members are requested to register at that time. They will thus have Monday free for practice, and will not have to stand in line for the general registration on subsequent days.

Charter for College of Surgeons Presented

Shown above, right, is Dr. R. L. Sanders, Memphis, President of the Tennessee Chapter of the American College of Surgeons, receiving the Charter for the Tennessee Chapter from Dr. Prather Saunders of the home office of the American College. The presentation was made during the first scientific session of the Tennessee Chapter held in Nashville October 28, 1952.

Public Service

THE TENNESSEE TEN

Tennessee Leads the South in Civil Defense

In Tennessee, the medical profession was the first group to organize for civil defense preparations in case of a wartime disaster. The doctors were even ahead of the State Government. The work was begun under a Committee headed by Dr. James C. Gardner and is now being carried on under the leadership of his successor, Dr. James E. Wilson of Memphis. A recent survey by the United Press credits Tennessee with leadership in the South in the matter of civil defense organization. The United Press story follows:

"The State Office of Civil Defense has ordered equipment to stock 200 medical aid stations, purchased 5,000 litters, and built a radiological monitoring laboratory that has toured the State to instruct classes in the major cities. The State has placed an order for five rescue trucks which will be assigned to mobile support battalions. Orders are being placed for communications equipment and for a mobile laboratory which will be used to train county farm agents and agricultural groups in defense against biological warfare. Local civil defense units are being organized throughout the State and about 140 local Directors have been appointed.

"The Ground Observer Corps, sponsored by the Central Air Defense Force in coordination with the State Civil Defense Office, has established observation posts, and appointed supervisors, but more volunteers are needed. 'Louisiana and Georgia would rank next,' the United Press said. 'Most of the other Southern States have some legislation, a paper framework, but little muscle in their CD picture'"

How Do TSMA Presidents Feel About the Honor?

How does a President of the Tennessee State Medical Association feel about the honor given him by his fellows? What are his sentiments when he retires from the Presidency and looks back on the year he has spent leading the organization?

I asked Dr. Ernest G. Kelly of Memphis to write out, for publication in this section, his own sentiments after he had retired from the Presidency last April. This publication is a bit belated, but we want to pass it on to the membership at this time. Dr. Kelly wrote as follows:

"I would like to take this opportunity of telling the doctors of the Tennessee State Medical Association how appreciative I am of this honor you have bestowed upon me by permitting me to be your president for the year 1951-52. It is an honor that I shall cherish as long as I live. It has permitted me to make contacts and friendships that I am sure will last through the years. It has given me an opportunity to become better acquainted with some of the members whose viewpoints on the surface seemed at cross purposes with mine, and I was able to learn that under the surface our aims were the same—a bigger and better State Medical Association.

"I became convinced that the 'old so and so' one dislikes is very often the 'old so and so' one doesn't know.

"It would be untrue to state that every man in the Association is a man of unimpeachable honor and integrity, but I can say that I believe that a higher percentage of integrity can be found in the medical profession of Tennessee than in any other group of similar size, whatever be its calling.

"Another thing that impressed me as I traveled over the state was the good fellowship that existed among the physicians. Whether the society be large or small, good fellowship was there. I am convinced that if you asked any physician in any of the larger societies to name 10 of his best friends, 7 or 8 of those named would be fellow physicians. I specify larger societies not necessarily because better fellowship exists in the larger societies, but in some of the smaller counties there might not be 7 or 8 doctors to choose from. This is unusually good when there is so much personality involved in the practice of medicine. Someone has said that there was more jealousy among the doctors than any other profession except the ministry.

"To say that I have done the best I could during my incumbency probably could be questioned, as one rarely ever does the best he can. But I can say, however, I have responded to every call made upon me as president of the medical society and have either represented the society or had representatives there when representation of the society was desired or needed.

Pays Tribute to Auxiliary for Its Work

"I cannot lay down the mantle of this office without paying belated tribute to those untiring and unfailing Allies of ours who for the past 3 years have done more work and accomplished more in making this society the close-nit organization it is today than the doctors themselves. I refer, of course, to the Woman's Auxiliary to the medical society, both state and local. I can remember when the medical auxiliary didn't rate very high with the Association. That was before they were given anything to do. That was before we undertook to sponsor the Essay Contest, a task that could not have succeeded without the untiring efforts of the auxiliary.

"Perhaps we can learn a lesson from our experience with the Auxiliary—perhaps there are some other elements, some members of this Association, whom we don't think will work because they haven't been given an opportunity. Let's seek them out and see that they have an opportunity to make their contribution to a bigger and better Tennessee State Medical Association.

"Finally, let me urge you, one and all, to fulfill your obligations as American citizens. Register and vote; vote just as I plan to vote, 'for whomsoever I please,' but vote. Not only is the future of American medicine at stake, but the future of America itself.

ERNEST G. KELLY, M.D."